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28th YEAR. No. 319.

JANUARY, 1932.

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IN TOUCH WITH EVENTS

ONCE more we have to send our readers and supporters our best wishes for the Coming Year and trust that those who are claiming that March should see us more free of entanglements than we are now or have been for some time will prove correct. We like to think they will. Then, being more or less able to build up that which recent years have pulled down about our ears, and to push forward into markets from which we have been pressed back, we can settle down to the work with the fixed idea of making a good job of it. The year 1931 has been a bad one, disastrous to many, but this journal, thanks to the support it received from those to whom we are sending good wishes for the future, has, we are glad to say, been able to hold its own against 1930. For this many thanks.

It will be noted that we have introduced a change with regard to last year's Index, having included it in the pages of the current number. Several of our readers have asked for some such change to be made.

* * *

Publications received include *The Agricultural Journal*, issued by the Department of Agriculture, Fiji, which discusses citrus fruit pretty extensively and, of course, coconuts, with a special article on "Rat Control on Coconut Estates." By the way, we note that "Our Friend" in January, 1925, Mr. A. C. Barnes, who, at that time, was doing excellent pioneer work with palm-oil in Nigeria, is now Director of Agriculture at Suva, Fiji.

* * *

Dr. W. Bally and Mr. G. A. Reydon have contributed a useful but far too short summary on "The Nematod (or Worms) Disease of Coffee" to the 200-page report on this trouble published under the title of (in Dutch) Report of the Malang and Boeseki Experiment Stations on the Nematod Disease (Wortelaaltjes in de Koffiecultuur). To those who can read Dutch this will be most useful, whilst the Summary ably discusses the pest and possible methods for fighting it, in a wonderfully efficient manner in ten pages at the end. The bibliography gives a list of 87 reports, and books, many in English, on the subject discussed generally under the heading of *Tylenchus*.

We have received a copy of (1) "Travel through Tanganyika" (88 pages), picturesque, precise and, one feels, accurate to a letter. Copies from General Manager, Tanganyika Railways, Dar es Salaam; (2) "Travel in Kenya and Uganda" (195 pp.), also full of useful matter. This time copies can be had from the General Manager, Kenya Railways, Nairobi, Kenya Colony. Both guides are "packed" with photographs, and can be obtained (in London) from H.M. East African Bureau, Cockspur Street, S.W., who also have, or TROPICAL LIFE has, if they have not, a few copies left of the small illustrated guide to Trans-Nzoia, Kenya Colony, issued by the Closer Settlement Committee at Kitale, Trans-Nzoia.

* * *

The results of investigations on three samples of tea forwarded to the Imperial Institute by the Director of Agriculture in Nyasaland go to show that the tea was promising in quality but it might be advisable to carry out further trials by the modified methods suggested by technical experts and submit further samples for report and valuation, especially as the samples referred to above were manufactured in February, a time of year not considered suitable for obtaining a product of high quality.

* * *

Discussing fruit growing in Hong Kong, where the soil is said to vary from clay loam to sandy loam with a tendency to acidity especially in the top soils, it seems probable, the *Bulletin* of the Imperial Institute tells us, that some at least of the failures of fruit trees in Hong Kong recorded in the past, were due to the acid nature of the soils. When this is corrected and provision made to protect the trees, especially in their early stages, from the high winds, the prospects of obtaining satisfactory fruit crops would be much improved. Apparently therefore one feels that, on the whole, Hong Kong had better try other crops first to sweeten the land as has to be done elsewhere.

* * *

Reports from Victoria, B.C. are telling us that in a canyon of the Rocky Mountains in the northern part of British Columbia, two lizards have been found, deep under the earth in a seam of coal. Miners came across them when working for the first

time on a newly-discovered reef. When the lizards were released from their tomb where they must have lain for countless thousands of years they amazed the miners by showing signs of life.

One of the lizards died after a few brief and languid movements, but the other is clinging tenaciously to the vital spark that it has maintained through centuries and has been shipped to Ottawa for examination by Dominion scientists.

* * *

The Board of Directors of Barclays Bank (Dominion, Colonial and Overseas) recommend a final dividend for the year ended September 30th, 1931, at the rate of 8 per cent. per annum on the cumulative preference shares, less income tax at the rate of 4s. 8d. in the £, and a final dividend on the "A" and "B" shares at the rate of 5 per cent. per annum, less income tax at the rate of 4s. 2d. in the £, making, with the interim dividend paid in July last, $4\frac{3}{4}$ per cent. for the year.

* * *

Congratulations to the P. & O. Co. on their successful year ending, even in their woeful times, with a net profit, to September 30, of £947,802 against £1,165,004 during the previous twelve months, and £1,241,602 during 1928-9. The British India Co., with which the P. & O. is closely associated, also did well, their results to the same date (September 30) netting £296,665, or nearly £3,000 more than the £293,842 obtained in 1929-30. Why cannot the West Indian-U.S.A.-South American lines do as well? The competition to and from India seems very keen and yet, look at the results! The wealth of the Indies is still better, apparently, than the wealth (always a delusion) of the Eldorados of old times and even to-day.

* * *

The annual report of our Imperial Forestry Institute has much to attract the attention of the most typical lay (abed) mind and keep us all interested. For this reason alone one was glad to see that the *Morning Post* gave up a considerable space on December 1 to tell its readers what the Colonial Forest Services have been doing via Oxford, where the headquarters are established.

* * *

More than 2,000 specimens sent in by officers of the Colonial Forest Services were identified during the year. Twelve new species were found among the specimens sent. One of these came from our own island of Trinidad, where it is a fairly common tree, known locally as Bois Lisette. Why it had not hitherto been identified was that it had never before been found in flower. The leaves of trees in tropical forests are often so similar one to another that experts cannot identify them unless they see the flowers. Many tropical trees, however, only come to flower in 30, 40, or even 60 years.

The trade in agricultural and dairy machinery in South Africa is so substantial, we are told, as to deserve separate mention, especially on the selling side. During the last five years, i.e., 1925-29, the imports of tractors alone had increased from 199 machines, valued at £42,998 in 1925 to 4,905 machines, worth £808,359 during the two years 1928-1929, and the ratio of importation should expand slowly. Unfortunately our share of this trade generally, which reached to over £1,185,000 during the eighteen months ending June 30, 1930, tends to shrink. "We discussed the situation," the report tells us, "with distributors at a number of centres and were generally met with replies which indicated that the chief considerations responsible for our loss of orders in other branches of trade hold good, too, in this line. Makers in the U.K. were too little inclined to study the market and to produce special types of machinery to meet local needs, and instances were given in which substantial business has been lost through this conservatism." Alas and alack! we thought such things no longer existed. They should have died in the '80's; can we kill them in these '30's?

Gold v. Cacao in the Gold Coast.

MR. THOMAS BREAKELL, M.I.M.M., of Brasington Hall, Derbyshire, writes as follows in the London Press confirming what we keep hearing from elsewhere regarding the possibility of gold-mining in the Gold Coast coming prominently to the fore. If this should prove to be the case then, as we pointed out in November (page 218) a draw for labour may be made on those now grumbling at the low prices they are getting for their cacao. This is what Mr. Breakell tells us:—

"The very interesting and clear article in your issue of the 27th November with reference to the Gold Coast mines will have special interest to a large number of investors who put their money into gold mines about thirty years ago.

"As one who had some years experience of management (at Tarquah and Abosso) and inspection (of properties in other parts), I can confirm all that your correspondent writes. There are, without any question, many possibilities for low and medium grade mines, and probably for some of high grade now that the health conditions are so much improved.

"The Gold Coast certainly did deserve the name of the white man's grave then, and the difficulties of management from this cause alone were enough for me to advise my principals not to risk their money although, with the exception of transport, the prospects in all other ways were excellent. It is to be hoped that now we shall see a renewed interest in a field that will certainly be developed to a large extent some day."

SISAL PRODUCTION.

Major Walsh's Gathering of the Clans.

What will, one wonders, be the final result of the monster meeting (comparatively speaking) of sisal producers and others anxious to advance the interests of their side of the industry which foregathered in the large Council Room of the London Chamber of Commerce at Major Walsh's suggestion? All present were struck with the size of the meeting and the strength that seems to be behind the industry so keen to progress and, at the same time, so ready to safeguard itself against competitors whether they appear in the guise of other fibres or the much talked of strippers and it was on this latter point that Mr. Martin de Cossio, speaking for Mexico, gave many of us detailed news that we heard for the first time.

Undoubtedly the chief honours of the morning fell to the representatives for Mexico for the masterly way in which they laid their case and the case for sisal generally before the meeting and caused us to realize that, whatever happens in the way of restriction, it must be remembered that Mexico alone, of all the producing centres, can produce nothing but sisal and therefore, in urging Yucatan to cut down her allowance, consideration must be given to the means by which those Yucatecos can live who will be unable to cultivate and ship their fibre. We have been assured for instance that soil or humus suitable for vegetable growing is so non-existent in the peninsula that it pays to bring it by train-loads from hundreds of miles away to make up the beds. If this is so, the cost of living in such places must be very high.

With such costs we were told of the substantial sacrifices that Mexico has already made to help reduce the output of sisal generally to a parity with the world's requirements. Now we are left with the query, "Shall Mexico continue to restrict, or go 'all out' and ship all they can this crop?" "Our normal production approximately is 700,000 bales of 400 lb. each (about 125,000 tons). In face of the difficulties confronting producers, owing to supplies having outstripped demand, the world depression, &c., &c., that was making itself felt even two years ago, Yucatan wisely started to restrict her output by reducing her production in 1929 by some 50,000 bales or about 9,000 tons. During 1930 the reduction reached 125,000 bales (23,000 tons), and this year as much as 250,000 bales or 45,000 tons is likely to have been cut off. This means that in these three years alone, Yucatan has reduced her quota towards the world's supply by some 425,000 bales or 77,000 tons if not more and yet whilst this is happening," added Señor de Cossio, "other sisal producing centres continue to push on their production in ever increasing quantities. In face of this, I believe that the time is ripe seriously to face this state of affairs, realizing

that if sacrifices have to be made, as surely must be the case, they will be less painful individually if made together."

"In that case I would claim that the output of sisal must not be increased but reduced. This being so we must unite to face the solution of our problems, and for that I can offer the definite co-operation of the interests I represent providing of course that, in face of the sacrifices that Yucatan has made up to now, other producers agree to show themselves ready to do the same.

"If Yucatan could change or substitute other crops or industries for sisal she would have done so to a large extent years ago, but they are unable to do this on account of the nature of their soil, which does not lend itself to the cultivation of other crops than sisal. We have no arable lands, no rivers, and being unable to compete with other cultivations we are compelled to continue with the *Agave*, native to our country, and concentrate our efforts to improve its quality and cheapen the cost of production."

When we come to the several tables included in Sr. de Cossio's statement we are not sure whether we can make them tally. It will be remembered that in our (last) March issue we gave a table from Messrs. Wigglesworth and Co.'s annual report, showing the world's output of sisal and other hard fibres, including Mexican henequen or sisal. In 1927 their output was 120,000 tons, which increased to 127,000 the next year, and then dropped to 101,000 and 104,000 tons respectively in 1929 and 1930, against, according to de Cossio, an average output of Manila fibre of 160,000 tons during the last ten years, whilst the imports into the U.S.A. were, he claims, as follows:—

		1928	1929	1930
		TONS	TONS	TONS
Manila	.. ..	47,313	72,190	64,052
Sisal	.. ..	134,616	134,683	85,661

This shows that America alone took 49,000 tons less sisal than in either of the two years 1928 or 1929, whilst for the eight months, January to August of this year, America took 21,264 tons only of Manila hemp against 47,886 tons in 1930, and 64,635 tons of sisal against 57,081 tons, i.e., 26,424 tons less Manila and 7,554 tons more of sisal.

One would very much like to know who is absorbing the Manila fibre that should be needed by America. Will our Philippine friends explain and also say why America's imports have dropped?

Finally the Mexican representatives quoted a table showing the world's production of sisal to have amounted to 203,000 tons during the twelve months ending June 30 last. In this table Mexico, which produced 127,000 tons in 1928 and an

average of 113,000 tons during the four crops 1927-1930 (see *Tropical Life*, March, 1931, p. 44), is credited with having produced 61,000 tons only. This, at $5\frac{1}{2}$ bales to the ton of 2,240 lb., means 335,000 bales, against the probable average reduction in the output for 1930-1931 of 188,000 bales or 34,000 tons (say half of 375,000 bales or 68,000 tons restricted in the two years). One feels, therefore, that, including restriction, this centre has still to account for a shortage of output of 18,000 tons, which is a fair amount against the 61,000 tons only, put down as exported (not produced) during the year ending June 30 last. We do not wish to appear to be quibbling over these useful figures, but only point out that they are not easy to understand since almost immediately we are told that the stock on June 30 was 55,000 tons (or, roughly, 303,000 bales). We are referring to the following table, which puts the Mexican (Yucatan) output at 105,000 tons again for 1931-1932, against 61,000 tons in 1930-1931. Here are the two tables:—

WORLD'S SISAL OUTPUT (ESTIMATED) MEXICO RESTRICTED.

JULY-JUNE, 1930-31		TONS	
Mexico .. ..	..	61,000	<div>of which</div> <div>90,000 tons went to</div> <div>U.S.A.</div> <div>113,000 tons went</div> <div>elsewhere</div>
Java (and Sumatra) ..	..	62,000	
Kenya and Tang. Terr. ..	..	72,000	
Elsewhere .. ..	..	8,000	
Total		203,000	

WORLD'S SISAL OUTPUT (ESTIMATED) MEXICO PRODUCING IN FULL.

JULY-JUNE, 1931-32		TONS	
Yucatan Stock .. ..	..	55,000	<div>of which</div> <div>110,000 tons will go to</div> <div>U.S.A.</div> <div>110,000 will go else-</div> <div>where</div>
.. Prod.: 1st 6 mths.	..	47,500	
.. " 2nd "	..	57,500	
Java (and Sumatra) ..	..	57,000	
Kenya and Tang. Terr. ..	..	65,000	
Elsewhere .. ..	..	12,000	
Total		294,000	

Apparent surplus, on June 30, 1932, will be 70,000 tons without including present small stocks in Hamburg and Antwerp. Truly can Señor de Cossio ask, What about it? What do you propose to do?

We must, after all, leave until our February issue the important information concerning the grip that the "Combine," i.e., the stripper and thresher machine, is said to have got on some wheat-producing centres as compared with the reports of those who either will not discuss the subject or claim that up to now the machines are still in the experimental stage only.

Also we would point out that both Sr. Martin de Cossio and his brother strongly dissent from the views we expressed in our leading article in September concerning the state of labour in Yucatan and claim that our statements are entirely incorrect. This being so, we hope to be able to publish their views on the subject at an

early date. Already we are in receipt of a letter from Sr. Rafael Peón of Merida, who also states that we have got hold of the wrong story concerning both the labour conditions and the reductions in duty. "No abolition of taxes whatever has been made on sisal," Sr. Peón writes; he was we believe at Oxford at one time. "On the contrary, since July additional taxes and burdens have been imposed on this industry." And so the story runs on. We wrote at length to this correspondent at Merida on November 13, and hope to publish his letters in the near future. There are many Peóns in the sisal industry we have been told, Sr. Augusto Peón being the chief and Sr. Rafael is a nephew of his. So we are learning quite a lot about Yucatan by degrees, which is all to the good.

* * *

We read in the October issue of the *Monthly Journal* of the British Empire Chamber of Commerce of the U.S.A. and situated in New York City (25, Broadway) that our own West India island of Jamaica is to have a second rope-making factory, the Legislative Council of Jamaica having authorized the Government to import the machinery. The comparatively small plant will be installed at the decorticating factory, which was established by the State nearly ten years ago in a western parish where sisal growing was started to provide an industry that would be unaffected by drought. This plantation and factory were operated by the Department of Agriculture for a short period, when they were leased to an individual.

The production of sisal has stood the district in good stead, despite world depression in trade and industry, and it has been decided that the bulk of the sisal prepared in that part of the Colony shall be used for rope-making to enable the factory to continue operations. This will now provide Jamaica with two cordage concerns, one being located in a central parish.

Regular students of the Bournville Works *Magazine* no doubt find every page has something to interest them. Whilst fully realizing the regret felt by the firm and their staff at the retirement of their old-time hands, forty years of service more or less, there is much to learn from the paragraphs wishing them well in their retirement to show "how the world wags and has wagged" since the nineties. Now and then glimpses of the machinery when first used creeps in and is noted. Albert Hach, for instance, in the transport department, saw the despatch work grow from one mare and a van to steam and then petrol lorries, whilst William Jackson stoked and drove the first "Robey" engine used, in 1892, at Bournville for working their electric light supply, and these are but two of many similar tales.

STOCKFARMING.

NEWS from Cyprus, via Hon. M. T. Dawe, O.B.E., who directs such matters over there, speaks of the very heavy losses of sheep and goats in the Tilliria area, the majority of deaths being due to stomach-worms. This cause is also responsible for many deaths of animals in other parts of the island. The regular dosing of the sheep and goats with a solution of copper sulphate is being satisfactorily demonstrated by the Veterinary staff and owners are being taught how to carry out this simple form of treatment. The main symptoms of this disease are unthriftiness, debility, diarrhoea and, sometimes, swelling under the lower jaw, the animals dying after an illness lasting from three to ten days.

More cheering news concerns suggested annual sales at the Government Stock Farm at Athalassa, where in order to encourage cattle breeding and the export cattle trade which has shown considerable development of late, particularly with Egypt, Palestine and Malta, the Government have decided to sell annually, by public auction, the surplus stock available at the farm. Furthermore it has been decided to hold these annual sales, so that cattle and poultry breeders of all parts of the Island may get an equal opportunity of purchasing such animals and poultry as may be available for disposal.

The first sale took place on November 12th and 13th, when there were offered for sale 7 cow and 3 bull calves, 1 cow in milk, 5 young mules, 50 sheep (native and cross-breds), 1 boar pig and 30 young pure-bred pigs (Large Blacks), a large number of poultry of various imported breeds including 15 turkeys, and also a number of pure bred Angora rabbits. Everything in the shape of stock therefore was purchaseable, and there is no doubt that the Government means to make a success of the island's stock and poultry raising possibilities.

India.

The British Government's insatiable search for knowledge and hence her officials' ceaseless endeavours to try and satisfy that search at least in part, has brought before our notice a reprint of the Scientific Reports of the Imperial Institute of Agricultural Research at Pusa for the year 1930-31, under the directorship of Dr. B. A. Keen, D.Sc., &c.

At the start the report calls attention to the abundant evidence from the Pusa field experiment point of view, and from numerous trials elsewhere that nitrogenous manures give increased yields. With potash on the other hand one of the most aggressive indications is the apparent ineffectiveness or even depressing effect of potassic fertilizers on yields, the yield being consistently below that of the unmanured control plots. The matter is studied fairly in detail, and deserves attention,

especially on the part of those tending grasslands or raising feed for stock.

Moving on to p. 17, where the position of stock and dairy farming in Indian agriculture is discussed in detail, one is at once met with the statement that the outstanding feature of Indian agriculture in general is that not only are the cattle not an integral part of the agricultural system, but, in addition, their numbers are largely in excess of all possible requirements even for the inefficient service to which the system condemns them. The cattle are not properly bred or fed, and thus the supplies of manure, which would enrich the soil and milk, which would bring in a cash income, are both inadequate. Furthermore the sale of stock for slaughter is closed to the bulk of the cultivators for religious reasons. The poor beasts can waste and die from want of care and food, but must not be killed.

Altogether the report stresses the backward state of all forms of animal husbandry in India. While research is essential for solving many urgent problems and as an insurance against disastrous mistakes in the future, there exists an immediate necessity for active propaganda in favour of known methods of improvement in animal husbandry and in all phases of the dairy and dairy products industry in India. This work, and the training of students wishing to enter the business, fall predominantly on the Imperial Dairy Expert and his staff, and it is evident from a perusal of the present and past reports of that section that such advice and training constitute two of the most important and indispensable portions of its activities for the betterment of Indian agriculture.

The United States.

Commenting on the various problems connected with the breeding and fattening of cattle in U.S.A., Mr. S. Taussig, as quoted by the August, No. 8 *Review* of the International Institute at Rome, tells us how it has been shown in a previous issue of that useful publication (May issue No. 5) how with beef cattle raising the highly developed specialization in cattle farming leads to a separation into the two stages of breeding and fattening in the United States. The distinction, though not absolute is very clearly marked. In the Range area there are many cattle breeders who feed their stock well enough for them to be sold directly to the beef market, and many feeders, even in the centre of the feeding belt, who breed their own stock, but nevertheless it may be said that the greater part of the beef cattle are bred in the range area and then sent some months before slaughter age to the feeding ranches. Sometimes an intermediate stage is interpolated on a "steer ranch," a ranch with good grazing where the cattle reach a certain degree of finish before being sent to the feeder proper.

The differentiation into breeding and feeding ranches carries with it a geographical distinction. The Range breeding area is far from the great centres of population, while the typical feeding region, the Corn Belt, is situated between the Range country and the great consuming centres in the east.

In the western Range country it is not possible to produce the feed required to fatten such quantities of cattle. On the other hand, the transport costs of bringing fodder from the agricultural districts of the east and central west into the distant Range country and of its return in the form of live cattle and beef would be excessive. Hence it is preferred to transport the feeder cattle to the districts where they can be fed up for market. Cattle are also bred in the irrigated farming regions of California and elsewhere where factory by-products, especially of the cotton industry are obtainable at low cost. The principal feeding region is, however, as said above, the Corn belt of the east centre of the country. About one-third of the beef cattle of the Range district is fattened in the Corn belt. The profit of the feeder comes less from increasing the quantity of the beef than from improving its quality. It has in fact been found that for feeding to be profitable the unit of live weight of the finished animal must fetch a higher price than that of the animal when purchased. Feeding reduces the percentage of slaughterhouse waste and improves the quality of the various cuts.

Specialization frees feeders from the problems and trouble of breeding and enables them to devote themselves entirely to their own restricted business problems. Feeding, unlike breeding, is entirely a business: speculation with a capital in comparatively rapid circulation. The feeder is not concerned with long period problems such as grassland management and herd selection. He buys and sells his stock when conditions are favourable and exercises thus a stabilizing influence on the meat market. Feeding is for this reason better able than breeding to adapt itself to changing market conditions and requirements, and new ideas find a more ready application in practice.

The greater part of the feeder cattle are steers, for most of the cows are retained in the herd for breeding and the old cows and bulls are slaughtered without fattening. About half the heifers, however, are not utilized for breeding and so are either sent to the feeder or killed at once. The female calves not being so highly valued as steers for fattening, their rational utilization is a very important question. Numbers of experiments have been carried out to determine to what extent their lower market value is justified.

The article or report is lengthy but not too long. Those interested in cattle breeding and fattening should write to Rome (Messrs. Bestetti and Tumminelli, S.A., via Michaelangelo Caetani 32, (115)) and ask the price of this particular Bulletin. It is quoted, we believe, at 14 liras.

Current values for stock in the U.K. ruled as follows, for picked animals sold under circumstances favourable for full current values, if only because every beast was known to be sound and perfect.

On December 8, buyers from all parts of the country attended the Slough Christmas Cattle Show, in order to purchase stock sent by the King from the Windsor Farms.

This comprised thirty fat bullocks and thirty-nine bacon hogs.

The bullocks made a total of £1,136, and the pigs £262.

The King's fat stock were not for competition.

Following on the Smithfield Club Cattle Show, the Champion was sold for £150, the highest price realized in the Cattle Section. Two Devons sent by the Prince of Wales realized £48 and £46.

A total of £5,894 was realized at an auction sale of cattle, 169 animals being sold. The average price was £34 17s. 6d. representing 61s. 1½d. per cwt. Last year's average was £36 6s. 11d., with 65s. 5½d. a cwt. In the sheep section 234 animals realized £894, an average price of 7s. 5½d. a stone.

Good News for Housewives.

A thousand butchers' shops supplying exclusively New South Wales meat may make their appearance in London, according to the *Morning Post* quoting a cable from Sydney, if a recommendation shortly to be made to the Federal Government is accepted. The main purpose of this recommendation is to put the meat export trade on a sound co-operative basis and get rid of the middlemen.

It is the intention to set up a meat sale control board in London supplying, perhaps, a thousand retail shops, the cost of which is estimated at about £2,000,000. Sir Archibald Weigall, former Governor of South Australia, is mentioned prominently in the scheme as having offered through an English concern to provide the retail distribution facilities in England. This is indeed good news, one can only hope that it will not prove too good to be possible.

The latest (1932) edition of "The South American Handbook," has just arrived and looks very smart in its yellow and red jacket. The work put into these handbooks must be "colossal" and reflects great credit to the patience and keenness of those responsible for their output to get the very latest information. Over 4,000 changes have been made since the last book appeared. The work that means is more easy to understand than to describe. Priced still at 2s. 6d., these books are not only invaluable for reference when travelling through or trading with any city or townlet (quite insignificant ones are included) throughout Latin America, but they provide the most exhaustive and interesting handbook for geography classes studying that portion of the globe in existence. Truly, as one teacher exclaimed, "It reads like fairy tales."

TEA SECTION.

THE annual report for the year 1930 of the Tea Research Institute of Ceylon has arrived. It covers over forty pages and concludes with a chart showing prices realized for tea grown on the St. Coombs Estate and how these prices were consistently above the market average for high-grown teas throughout the year. The laboratories of the Institute are situated on this estate and thereto all letters and enquiries should be sent, addressed to the Director, Tea Research Institute of Ceylon, St. Coombs, Talawakelle. Dr. Roland V. Norris is the director, Dr. Gadd the mycologist, and Mr. T. Eden, M.Sc., the agriculturist chemist. The secretary however, Mr. A. W. L. Turner, is at the office of the Institute, Victoria Commemoration Buildings, Kandy.

Reports received from brokers and buyers in London go to show that the present system in Ceylon of preparing tea for market is satisfactory and meets with approval on this side. Speaking generally, the estates are reported to have been free of any marked incidence of fungus disease. Of root diseases, *Poria* continues to be the most common complaint, a disease found in the cover crop *Tephrosia vogelii*. Trouble with seedlings is diagnosed as being due to unfavourable conditions of growth, e.g., unsuitable moisture condition in the soil, insufficient shading, unfavourable soil reaction, &c. There were fewer complaints of insect pests, red spider being the most aggressive, but in parts of Uva serious loss has again occurred from attacks of nettle grub.

Turning to manuring, a study has been made of the preparation of "artificial" farmyard manure from Maana grass by the Adco process. Experience in tropical countries of this process has not been consistently successful, the nitrogen content of the finished material often being unduly low. Considerable modifications were therefore made in the method of preparation with highly successful results. This experiment would suggest that where waste vegetable matter of a grassy nature, such as Maana grass, is available, there should be no difficulty in preparing a useful bulky manure.

Much time has, however, been occupied in preparatory work for the field experiments rendered possible by the move to St. Coombs. Towards the end of the year a series of manurial plots to investigate the influence of nitrogenous and potash manures were laid down. In addition to observations on yield and other conditions of growth, leaf from these plots will also be manufactured on the experimental side of the factory and some information of the effect of the treatment on quality may be obtained.

Further, on page 34, we are told that it is more difficult to produce good quality tea during the wet periods owing to the following facts:—

(1) Poorer quality in the crop harvested.

(2) Increase in work necessary to wither the leaf.

(3) Decrease in the drying efficiency of the atmosphere at the very time when more efficient drying is necessary.

At the same time this must not be taken as an excuse for producing poor teas during this period, since with modern conveniences it is possible to overcome the difficulty arising from the second and third factors. It is just as well, however, to bear in mind that in spite of overcoming the second and third factors, the first limiting factor still persists, and that the same quality tea is hardly to be expected during the wet season as during the dry season. The reason for this must be ascribed to a difference in the quality of the leaf and not to the effect of using conditioned air. The only true comparison of the benefit of using proper withering schemes against very slow natural withering is to compare the teas produced with and without conditioned air, and also to take into consideration the improvement in the possibility of having the leaf ready for rolling according to programme instead of having to delay the work while waiting for the leaf to be ready.

The information on the effect of rolling on the withered leaf has no doubt attracted general attention, for it runs as follows (pp. 37-38):—
"The process of rolling the withered leaf consists in twisting the leaf under varying degrees of pressure so that it is first crushed, sap is expressed, and the leaf is broken up. During the roll breaking and sifting, the finer portions are removed from the coarser particles, the actual amount separated out depending on the manner of rolling carried out, and the care given to roll breaking. Not only does the amount depend on the rolling, but the way in which the separated fractions are made up also varies, i.e., the pluck does not always break up in the same way, so that the nature of the leaf put out to ferment after each roll varies according to the rolling programme, and is therefore a variable factor in fermentation. Since the actual shearing effect of the rolling is a purely mechanical one, its effect is best measured in a mechanical way by examination of the leaf after rolling for twist and separating out the various parts composing the mass of rolled leaf. The investigation of the mass of rolled leaf has been carried out by picking out the stalks, tips, and leaf from the bulk and weighing the different portions, and then by further examining the size of the various particles present after rolling the leaf by sifting out the various sized particles in the same way as was done with the tea grades. The distribution of the particles in the various dhools remains fairly constant since the mesh of the green leaf sifter seems to be the deciding factor. A measurement of the actual percentage of dhools separated out is therefore a

good criterion of the mechanical effect of rolling, apart from the separation of tip and stalk which can be determined by picking. A few determinations have also been carried out on the differential effect of heavy and light rolling on the break-up of the leaf and also on the temperature rise which takes place as a result of the fermentation of the leaf and the friction set up. These observations which must be carried out for some time have shown that the amount of pressure applied in the rollers not only affects the break-up of the leaf, and the temperature of the leaf in a marked degree, but also the subsequent fermentation of the leaf. It is not quite clear whether this is due to a greater crushing effect, or higher temperature conditions in the rollers, since the variation in pressure produces entirely different conditions of manufacture. Thus although very heavy pressure in the first few rolls may produce a high temperature it also ensures that a very high percentage of the leaf is quickly removed from the seat of high temperature to the cool fermentation conditions of the rolling room, while a uniform condition of fermentation has been set up in the leaf separated. On the other hand light pressure does not result in such high temperatures in the rollers, but it produces a gradually increasing fermentation as more leaf gets crushed and, since the amount separated in the first dhools is so small, it means that the bulk of the leaf is fermenting at a comparatively high temperature for a long period. The question of pressure on the rolled leaf is thus a complicated one and it is necessary to withhold conclusions of the interplay of the factors concerned until the matter has been more closely studied."

"*The Coconut Palm*," by H. C. Sampson, published in 1923, is very largely a report on the coconut in Madras. It is, however, a very informing treatise on the tree itself, approaching the subject of the coconut business in what we have long recognized in the Philippines as the only safe direction. Its wealth of original information on the structure and behaviour of the tree provides a useful check on the knowledge of this kind, dependent too long on observations in the Philippines alone. And in its illustrations it is the "best work in the field."

* * *

The above paragraph is taken from the third edition of Dr. Copeland's well-known work, "*The Coconut*." It will be found on page xvii of the Introduction, whilst on the previous page is the following reference to another of our works on coconuts, viz., "*Coconuts, the Consols of the East*," which we are told, "contains the most complete and recent compilation of statistics on the subject and in its enthusiastic treatment gives the best expression to the business opportunities which the coconut offers."

Locusts—Cuss or Cure?

Who is trying to help Check Them?

Both the Press and the Public continue to draw attention to the appalling devastations of the locust pest everywhere, as well as to the ridiculously inadequate attention being given to the matter. The other day—December 2nd—the Council Room of the London Chamber of Commerce was packed with sisal men anxious to benefit the industry. Surely, therefore, if the representatives of those who, throughout Africa and elsewhere, are suffering from the visitations and depredations of the locusts were summoned to a similar meeting to discuss the most probable means of checking, if not of entirely annihilating the pest, they would once more crowd, not the Council Room, but a much larger hall to thresh the matter out with the makers of the necessary apparatuses, fluids, powders, kill-quick gases, &c., some good would accrue. What strikes us so forcibly is the utter lack of interest shown by the makers to this splendid opportunity of securing big orders. If we all sat in our offices and waited for business to come to us, to come also from those who need to be educated up to call for and then to use suitable remedies, business would be ten times worse than it is to-day. It will continue being bad in this section of industry until the firms making the above articles make a move to meet those needing help to fight the locusts.

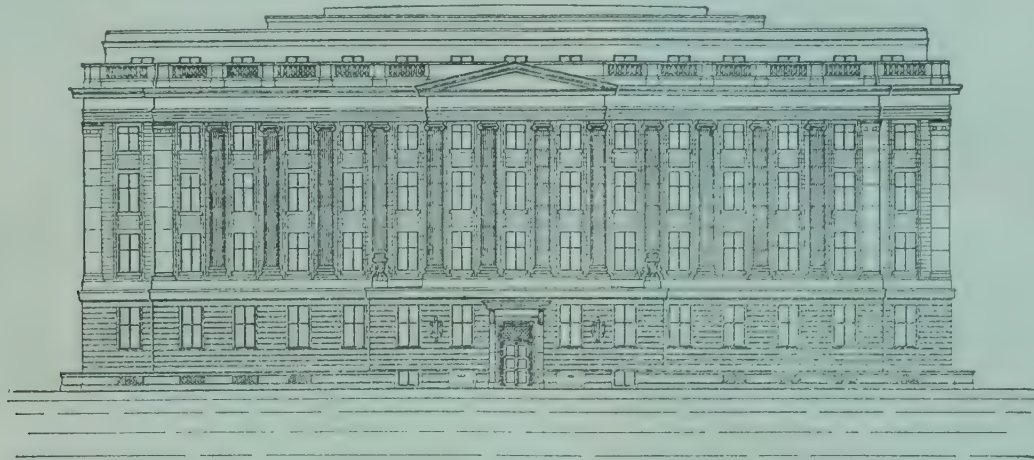
Our contemporary *East Africa* has some excellent pin-pricks on the subject, but evidently a long ox-goad is what the makers need to make them move in spite of being told by one Nairobi authority that during the past twenty or twenty-five years South Africa alone has probably spent £12,000,000 in controlling locusts. What proportion, if any, of that sum found its way to this side?

Here is another, showing that the demand for anti-locust apparatus is not likely to run dry just yet. A writer in the *Nairobi Standard* claims that if 2,000,000 men, women and children each swatted 100 locusts daily, it would take more than 34 years to exterminate one swarm. Why is it therefore that those who ought to be able to suggest remedies have, so far, shown no signs of making an effort to get into touch with the sufferers and the local entomologists, &c., with the view of introducing one or more really useful means of getting rid of the pests? If a packed meeting came together because Major Walsh whispered to one or two of us who are anxious to save sisal from unnecessary trouble, how many more should come if called for to save these same planters and thousands of others from possible bankruptcy through neglected locust invasions? We sincerely hope that something will be done and done soon, to bring about concerted action, here and overseas, to check the trouble.

(Continued from p. 10).

the filling of that building? The countless treasures and specimens, the samples and choice subjects of investigations, how long will it take to move all these into the one building and place

deserved tribute to the forty years' work of Dr. Wellcome in promoting medical research, when he told us that in 1894 he had founded a laboratory for physiological research in this country, followed two years later by a laboratory for chemical research. When Kitchener had recaptured Khar-



The Wellcome Research Institution; the Elevation.

them in their final resting places. Anyone who has seen Dr. Henry even 25 per cent. interested in some choice object, say a poison in a short curling horn, that almost wants to poison you for looking at it, can easily realize how jealously Dr. Wellcome's scientific staff and super-scientists will be guarding their treasures and the anxiety they will experience until they are all settled down in their new abode. One wonders how long this settling down will take after the building is ready to receive its occupants.

Besides the scientists and eminent doctors present, we saw the Chilean Ambassador, the representative of the Swiss Legation and the Ministers of Egypt, Greece and Cuba.

In his address Lord Moynihan paid a well-

toum, Dr. Wellcome had been one of the first civilians to visit that city and had founded a research institute for tropical diseases, the first director of which was Andrew Balfour, who worked there for twelve years. In 1913 he had founded in London the Bureau of Scientific Research and the Historical Medical Museum, in 1914 the Museum of Medical Science, and in 1920 the Entomological Field Laboratory. All these were separate from one another, and the workers lacked the opportunities for hour to hour and minute to minute consultation which will now be possible under one roof.

The President of the Royal College of Surgeons had much more to say and said it with great effect. Unfortunately we lack space to print the full speech.

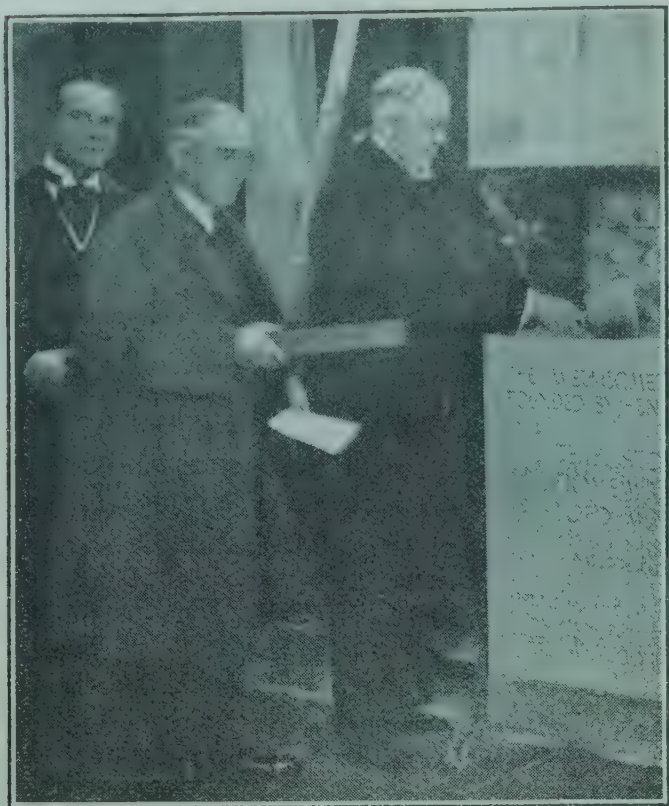
THE COLUMBUS CROSS.

An Englishman's Triumph among 450 Competitors.

How many of us know that the design submitted by Mr. J. L. Gleave, of Nottingham, an Englishman bred and born, and, at the start, only twenty-one years of age, was chosen for the Columbus Memorial Lighthouse for Aircraft, to be erected on a site of some 2,500 acres (? 50×50) on the Island of San Domingo. The memorial is to be symbolic of the Great Adventurer and all that his discoveries have done for the world during the past five hundred years, i.e., since the period of A.D. 1492-1506, when Columbus made his chief voyages and opened up the New World for those who were to come after him. The memorial is to be in the shape of a huge double cross, high at the head and sloping down to the end. The November *Bulletin* of the British Chamber of Commerce at Rio, gives full details of the idea, with a full-page illustration of the design and a photograph

of the genius who designed it. We have not the space to do more than report the success of this young English architect, who to-day is but twenty-three years of age. All we can add are the remarks made when awarding the first prize. These pointed out the wonderful use made of light, and how refuge had been taken in a directness, simplicity and force worthy of the great monuments of the ages. Seen from the air and from environment, it becomes a noble feature of the ground.

The monument has many loggias, courts and passages inside. Brilliant tombs in the centre of the Chapel, with Museum, libraries, and the long serpent-like black-green granite tail of sculpture, on which is followed the material life of Columbus rising out of the pebbly, sandy floor. All from the brain of an Englishman, almost a boy, of twenty-one.



Lord Moynihan, President of the Royal College of Surgeons, laying the corner-stone of the Wellcome Research Institution, with Dr. Henry Wellcome in the centre holding the level and Mr. Septimus Warwick, the architect, behind him.

"Tropical Life" Friend.

No. 319.

Dr. HENRY S. WELLCOME.

(The centre of the three figures).

WE have an added pleasure in introducing "Our Friend" this month owing to the rooted aversion of Dr. Wellcome to any form of publicity. For long years we have been trying to decoy him into our Gallery of Friends (sometimes known as "The Lives of the Saints") but he has always evaded us. Even now were it not that we can pretend it was really Lord Moynihan (with mallet laying the corner stone) on the right, or Mr. Septimus Warwick, the architect, on the left, we should hardly have dared introduce Dr. Wellcome (in centre holding the level) in the way we have done. All the more pleasure, therefore, in being able to do so at last.

That quaint, but most interesting writer Lafcadio Hearn told us, among his many tales, of the old Japanese patriarch who burnt his ricks of unwinnowed rice, i.e., his year's work and all his wealth, in order to call back the inhabitants of the village who were gambolling in the sea on a fête day because he, with his great age, had once seen a tidal wave approach and now saw the signs again. Rather than risk being wrong, he set his ricks blazing, as he knew doing that would for certain draw in all hands to stem the calamity. All came, and so did the tidal wave, almost on the heels of the last one, but, owing to the old man's sacrifice no lives were lost.

His fellow-men were so struck at this deed of self-negation that they canonized the old man in his lifetime, a thing never thought of before.

More than once, "coming up against" Dr. Henry Wellcome and the many wondrous things he has done, and is still doing for his fellow-man, has caused us to think of this story and wondered what such folks would have done in their amazement at the Will of this one man to do so much for others of whom he asks—nay more, from whom he will take—nothing in return. What can we do adequately to express our appreciation for such a benefactor? For those living in this country, or elsewhere, with the ever-watchful police, with ambulances, hospitals, &c., refusing to allow you to remain ill if they can help it, the work being carried out by the now amalgamated activities of Dr. Wellcome's various "children," under the name of the Wellcome Research Institute, is wonderful enough, but you must go into the unknown and uncivilized places abroad, or even on tropical estates and stations where help is not at hand to pounce on you if you totter, to realize fully what good the work of these various laboratories can do and are doing in sending you emergency medicines until you can reach medical aid, or *vice versa*, i.e., the aid can reach you.

The lay mind is aware that science has taught the modern physician and surgeon, to an incredible degree, how to prevent illness on the one hand, and to cure it on the other, or if it cannot be cured, to soften the pain and make life more bearable for the patient whilst he has to put up with it. What exact part Dr. Henry Wellcome has played, and enabled and encouraged others to play under him, in this work no one can estimate, but surely it is over the 50% mark, and who stands second to him his fellow-scientists alone know. So much for the work and workers, now for the domicile where all can foregather and carry on that work, whilst being in constant touch with each other. Here Dr. Wellcome found a link missing. He has joined up that link by arranging to house his various activities under one roof. It has had to be a big roof, 225 by 135 ft., with eight or more floors. All the space will be needed, and probably before long this benefactor of all nations will be calling for more room. If you journey down the Euston Road to where it touches Gordon Street, you will find it. The School for Tropical Diseases is immediately behind, and medical institutions and scientific centres surround it. Truly an ideal locality.

Here, on November 25th, Lord Moynihan, President of the Royal College of Surgeons, laid the corner stone of the building, which looks as if it was nearly three-quarters of the way to completion; unofficial inquiries confirm this if it is correct that the building will be ready for occupation about ten months hence. To erect such a Palace of Science is one thing, but what about

(Continued on p. 9).

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A jute crop in India. The plants on the right were fertilized with Chilean Nitrate, those on the left were not. See the difference.

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Chilean Nitrate Agricultural Service, P.O. Box No. 2233, Cape Town

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Coffee.

To Ferment or Not.

THE article on the Raoeng Pulper in our November issue, page 206, has certainly attracted attention, that too from home critics only so far. One rather wonders what remarks and names will be hurled at us from the other side, if our "must-ferment" readers feel it necessary to offer any comments at all. Of course it must be remembered that with Brazilian coffee, fermentation is the exception not the rule. The berries are gathered by the million, like sand from the desert, and dried.

Who has the time or wish to ferment those mountains of berries? It was largely to help that producing centre we understand, that the Raoeng Pulper has been put on the market where in spite of all its critics it is, we understand, going strong.

Now we have received the following letter on the subject showing that at least in one case the beans benefited when not fermented.

To the Editor of TROPICAL LIFE.

"MUST COFFEE BE FERMENTED?"

SIR,—Referring to the article on page 205 of the November issue on this subject of fermentation, knowing of the controversy aroused by the publication of that article, perhaps you will be willing to print the following extract from the *Bulletin* of the Institute of Agriculture at Rome, for August, on the subject, if only to confirm what your article claims to be the case.

"Liberian Coffee and Fermentation."

"In Surinam it is almost all Liberian coffee that is produced, which kind is best adapted to the conditions of that country. Owing to its peculiar taste and smell it was only possible to find a restricted market, the colour of the beans also not being as wanted. Fernandes, of the Experiment Station at Paramaribo, found these undesirable characteristics of this coffee did not develop if, after removing the pulp of the fruit, the bean was not exposed to fermentation but dried as quickly as possible at a high temperature at which the enzymes in the bean are rendered inactive. It was these enzymes that caused the less desirable quality of the Liberia coffee and it was found that fermentation of the beans after passing the pulper had no influence on its quality.

"A machine has been put on the market in which the beans are totally freed from pulp without fermentation and partially dried by centrifuge. They then enter a rotating drying machine in which they are dried at 80° C. In this way it is possible to prepare market coffee in continuous process in five hours from the berry state. The colour of the bean, which has no influence on the quality of the coffee, depends on the temperature at which it is dried. It is therefore possible, by changing the temperature, to produce beans differing in colour as required.

Yrs. truly,

FELLOW SCEPTIC."

Further comment is unnecessary.

Roads and Transport.

The Annual Exhibition in London.

AS was the case last year, our old friends the Motor Rail, Ltd., of Simplex Works, Bedford, had a prominent stall at the above exhibition at which they were showing the following Simplex light locomotives:—

(1) One 12/20 h.p. 2-ton type 2-ft. rail gauge, "Simplex" petrol locomotive.

(2) One 20/35 h.p. 2½-ton type 2-ft. rail gauge, "Simplex" petrol locomotive.

(3) One 20 h.p. 2½-ton type 2-ft rail gauge, "Simplex" Diesel locomotive.

(4) One locomotive as No. 2 but fitted with Ford model "A" engine.

The standard petrol-engined locomotives are now fitted with Dorman 4-cylinder engines of very substantial construction and include a number of detailed improvements.

The 20 h.p. Diesel locomotive has been introduced since the previous exhibition, having now been thoroughly proved in service under a variety of conditions. The 2-cylinder engine is of British design and manufacture. It is easily started by hand, and has a speed range from about 350 r.p.m. up to 1,600 r.p.m. It is quite flexible and develops excellent power even at the lowest speeds, consequently giving the locomotive a wide range of speed under loads. The transmission and other features of the locomotive are of standard design which has been proved in practice for a number of years.

The firm also exhibited separately a Davies patent detachable tube radiator of the type fitted to all "Simplex" locomotives. These radiators have, in addition to other desirable features, proved themselves to be unaffected by the vibration and shocks associated with light railway work.

The exhibition was well attended and we like to think that our friends did very well there.

Will our new tariffs include a 100% tax on wild "beasties" brought into the U.K., and if so will importers of bananas, &c., who fail to return a correct list of such imports be subject to dire punishment, especially for a second or third offence? One raises such a point because of the constant stream of such imports into this country, which occasionally includes a fine collection of bird-eating spiders, with a poisonous bite, in addition to which the hairs with which their bodies are covered have an unpleasant way of penetrating the skin in large numbers and causing very painful inflammation and swelling. One of the curators at the Zoo, for instance, who was mounting a dead specimen of a bird-eating spider accidentally rubbed his finger against the creature's body and received such a heavy dose of hair-like spicules that it was over a year before he recovered the proper use of his hand.

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Matter must be typewritten on one side of the paper only.

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Non-receipt of Copies must be notified to the Manager at Great Titchfield Street, and NOT to 5, Gt. Tower St.

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Tropical Life.

JANUARY, 1932.

Tropical Crops — Yesterday, To-day and To-morrow.

Can We Learn from the Results and Returns of Others?

WHEN one picks up the well-known Official Guide issued by the Mincing Lane Tea and Rubber Share Brokers' Association, Ltd. (14, Mincing Lane, E.C. 3),¹ published under the name of Rubber Producing Companies, what floodgates of memories, of joys, doubts and regrets does a careful perusal of its (nearly) 700 pages awaken in the minds of those who know the tropics and their crops, and the everlasting gamble that lurks in each crop for those willing to invest in them. How the returns shown make you realize that the favourite of to-day can easily become an outsider to-morrow, or a "scratched" horse in the year after. Nothing is sure, nothing stable, in spite of training, experience, and all the gifts Nature can bestow on the ventures to help you come in first at the post. Why must such things be? Can the mistakes be avoided? Whether the answers to such queries be in the affirmative or the negative, do not look through the new guide—for 1931—merely from a Stock Exchange point of view, a matter of buying this share or selling that one. Rather study it closely from a planter's (a very puzzled and perplexed one probably) point of view, and see what you can learn from it, especially on such questions as the interplanting of crops and of the cutting-out of one crop for another. Do you think the management of this, that or the other estate, who acted as they did in 1930 and especially in 1929, would carry out the policies they then embarked on if they knew 1931 and 1932 would have turned out as they have done? Whatever views you hold on that query, then ask yourselves where the policies chosen were wise or unwise, and finally learn where to avoid the pitfalls you see on the one hand or benefit by the wise or, if you like, the lucky strokes of policy on the other.

We have known men in the '80's who had cut out sugar for cacao, or cacao for coconuts, or the other way round. They did so, more than once to our knowledge, without any precedent to go by, or for any reason whatever except their disturbed and, in one case, almost frantic mind. Remembering this we would always shun cutting out crops merely because from hearsay another seems likely to do better. To do so surely is the maddest form

of gambling. Think what it means in time, and especially money.

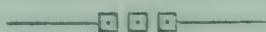
Cutting out inter-planted crops is a different matter, but even here make sure you choose the right one to leave standing: would you to-day, for instance, cut out coffee for rubber, or coconuts for oil palms, or tea for rubber? Study the guide under review and compare it with the one for 1930 and see what you can learn from the comparison, especially with regard to this sacrificing one crop for another. Would you, to-day, have done what was done throughout the year? Do you believe in interplanting coffee with rubber in any case? What is the benefit? Here is an estate with 3,033 acres of rubber interplanted with coffee: why not put 1,500 acres all rubber in the centre and plant the coffee to the tune of another 1,500 acres round the rubber? Doing so might help to check pests if they appear; the rubber would not overshadow the coffee, and both crops could be gathered very much better than if interplanted. This, however, is not cutting down one crop to plant another. Doing so costs time and money, and surely the most lethargic coolie or negro must hate cutting out good stuff, possibly that they have planted, to put in seedlings to come to maturity just when its crop is out of favour and the one cut out is racing home from other estates at a canter.

Will it be waste of time for anyone, "touching"

tropical planting, to approach the Guide for 1931 from such a point of view, and to do so, not to criticize the action of others, but to lessen your own chance of taking the wrong turning and to help you race home to clamouring markets along the right one? We have advanced one or two points only for consideration, but surely the experienced planter of to-day will find a dozen or twenty more.

Referring to the uninvited live-stock which is in the habit occasionally of travelling free with the bananas to this country and elsewhere, Brazil sent a mouse-opossum, and goodness only knows who sends the snakes, which, if they cause half the excitement over here that they do even on the hottest day in the tropics, are worth all the taxation that can be levied on them, as they do cause such fun among those outside the danger zone. Ought such live-stock to be declared, and if they, are what import duty will be levied to keep them from contaminating our own fauna?

We understand that the address of Lieut.-Col. Levey's new trade enquiry bureau, is Criterion Chambers, Piccadilly, London, W.1., where he will again be assisted by Miss Cheesewright.



MARKET REPORTS, GOSSIP AND PRICES.

RECENTLY when the value of the £ dropped to \$3.25 or \$3.26, its parity must have worked out at 13/4, possibly it went a shade below this, but that was low enough and thank goodness it is now improving. All the same those who are crying out that we cannot compete against Germany must surely be very wrong or else most of what we have read and heard since the middle of September is. The latest cry concerns sisal cropping knives, which we are told from Sheffield cannot be shipped to East Africa against the cheap German stuff. Now all German stuff is not cheap, at one time we saw axes, hoes, cutlasses, etc., go to South America well worthy of the gold that covered a portion of them, gold that did not wear off too easily, and surely with the £ at 13s. 4d., or a little better, both Birmingham and Sheffield can allow the ghost of "can't compete with Germany" to remain buried for a time. You cannot cut sisal leaves with tin or pewter blades. One, feels, therefore, this country with the £ at its present level can supply East Africa and elsewhere with sisal cropping knives against Germany and even against America, perhaps Mexico also, even against the home product, for we recently saw some illustrations of Mexican cropping knives, mostly hooked by the way, which looked decidedly home made, though probably none the worse for that.

One rather wonders how much longer America

will remain on the gold standard. On December 6th the New York correspondent of the *Morning Post* wrote in an instructive manner of the financial situation in America, Government, railways and private businesses when he told us that Wall Street feels that all the Government's energy should be devoted to the reduction of Government expenditure and the balancing of America's Budget.

Faced with a deficit of at least \$2,000,000,000 (£400,000,000 at par) for the current fiscal year there is no time for the Government to worry about private business. It can best help corporations and individuals by putting its own house in order. It is to be expected the situation will force the Government to return to a much wider basis of taxation as well as to higher rates.

The easy assumption that because that country has reduced its public debt at a great rate in the last few years, it can now afford to increase it immensely in order to balance the Budget should not be allowed to gain ground. In addition to higher income taxes it will probably be necessary to restore the numerous excise taxes which were familiar revenue producers immediately after the war.

The *Times* also, on December 14th, started to discuss America's huge deficits when it reported that something of a shock was given to a too

complacent public by the revelation of the hugeness of the prospective deficit of \$2,123,000,000 in the fiscal year ending June 30 next and of \$1,417,000,000 in the ensuing year, and the growing realization that matters cannot be further allowed to drift—moreover, that borrowing alone no longer provides an easy means of settling deficits. The reinstatement of 1924 income-tax schedules, widening the base of payments so as virtually to double the number of people to pay, and increasing rates largely is likely to be adopted shortly by Congress.

Whilst we are scheming and saving to make two ends meet at home it will be interesting to see how America progresses at the same game. Meanwhile, note on p. 16 about the top figure of America's population already being in sight. Restricted populations always bring restricted turnover in trade, even if the *per capita* wealth, as in France, remains high, if hidden away.

From elsewhere we gather the news that the trading results of the United Africa Co., including losses, less profits of subsidiaries, showed a loss of £949,940 for year ended April 30 last. After providing for depreciation, etc., there is a deficit of £1,288,122, which is reduced to £1,263,980 after crediting the net profit of £24,143 from the preceding year.

Another concern, the African and Eastern Trade Corporation, showed a profit for the year ended April 30th last of £15,470, against £14,803. "A" Preference dividend absorbs £13,800 and carry forward is raised from £37,883 to £39,553.

Moving to our usual market gossip we will start with:—

Vegetable Oils (London and Liverpool).

Liverpool speaks of a quiet market for palm-oil with Lagos at £20, softs £19 10s., mediums £19 10s., and Red Cherbro £19 15s. per ton all December-January shipment.

Moving on to oilcakes, this market has been irregular, owing partly to the disinclination of sellers to fix contracts whilst sterling is so uncertain. Buyers also seem anxious especially with regard to the future and some are making forward contracts to such an extent as to put considerable firmness in future rates. *With linseed cake, English made is quoted £8 5s. to £8 10s. ex mill, Spanish at £7 10s., and Californian screw pressed at £7 5s. ex ship. Cottonseed cake is worth £4 10s. with sellers at £4 5s. ex ship, but London made seems firmly held at £5 2s. 6d. to £5 5s.

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
Dec.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
19	16 15 0	15 7 6	15 5 0	14 2 6	14 2 6
16	16 15 0	15 7 6	15 2 6	14 0 0	14 5 0
12	16 15 0	15 7 6	15 2 6	14 0 0	14 5 0
9	16 15 0	15 7 6	15 5 0	14 0 0	14 5 0
5	16 15 0	15 7 6	15 5 0	14 0 0	14 5 0

Malabar copra, f.m.g.w.s. £ , Rahaul Plantation f.m.s. £ s

COCONUT OIL PER TON.

	CEYLON MILL SPOT	DEC./JAN.	ENGLISH DEODORIZED*
Dec.	£ s. d.	£ s. d.	£ s. d.
19	26 10 0	24 10 0c	33 10 0
16	26 5 0	25 10 0c	33 10 0
12	26 5 0	25 0 0c	33 10 0
9	26 15 0	25 10 0c	33 10 0
5	26 15 0	25 10 0c	33 10 0

c=Cylinders. * Barrels.

OTHER OILS PER TON.

	COTTONSEED					SOYA BEAN			PALM					
	CASTOR		GROUNDNUT		CRUDE		LINSEED		ORIENTAL		KERNEL			
	FIRSTS		CRUDE*		EGYPT		SPOT†		BARLS.		OIL‡			
Dec.	£	s.	£	s.	£	s.	£	s.	d.	£	s.	d.	£	s.
19	41	10	29	10	19	19	14	10	0	22	0	0	23	10
16	41	10	30	0	19	10	15	0	0	22	0	0	23	10
12	43	10	30	10	19	10	14	15	0	22	0	0	24	0
9	43	10	30	10	20	0	15	10	0	22	0	0	24	0
5	43	10	30	10	20	0	15	10	0	22	0	0	24	0

* Crude, naked.

† Net, naked, ex-mill.

‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL) CALCUTTA	LA PLATA	COTTONSEED EGYPT BLACK	CASTOR BOMBAY	SOYA BEANS GROUND- NUTS	MANCH. AFLOAT
Dec.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
19	11 0 0	9 0 0	6 3 9	13 0 0	13 0 0	7 8 9
16	10 18 9	9 0 0	6 6 3	12 15 0	12 12 6	7 0 0
12	11 0 0	9 0 0	6 6 3	12 17 6	12 15 0	7 3 9
9	11 10 0	9 5 0	6 6 3	13 5 0	13 15 0	7 7 6
5	11 5 0	9 2 6	6 6 3	13 5 0	12 17 6	7 6 3

Desiccated Coconut.

This article seems dull with sellers of fine on the spot at 25s. and medium at 26s. 6d. against 24s. c.i.f. for forward halves for December or December-January delivery.

Rubber.

At the time of writing this market was considered to be inclined to rule firm on restriction rumours and business is reported to have moved with more freedom and closed on December 12 with a rise of $\frac{1}{16}$ d. on the week which, on the whole, seems to have been active and buoyant though irregular at times, set-backs alternating with steadying spells possibly because cables from Singapore stimulated confidence, and the hopes that something will, in the end, be done regarding restriction.

Just before this, Messrs. Lloyd, Matheson and Carritt reminded us that during the week ending December 2, the American market registered a new low record with $4\frac{1}{4}$ cts., or $2\frac{1}{8}$ d. at par value but not our current value which at that time was $2\frac{1}{16}$ d. lb. During the next week, thanks to American support, prices improved $\frac{1}{8}$ d. then lost $\frac{1}{16}$ d. and ended as under:—

	1931 DEC. 9TH	1931 DEC. 2ND	1931 NOV. 25TH	1930 DEC. 10TH
SPOT QUOTATIONS—	s. d.	s. d.	s. d.	s. d.
Smoked sheet (F.A.Q.)	0 3	0 2 $\frac{1}{8}$	0 2 $\frac{1}{8}$	0 4 $\frac{1}{16}$
Crepe (F.A.Q.)	0 3 $\frac{1}{2}$	0 3 $\frac{1}{8}$	0 3 $\frac{1}{8}$	0 4 $\frac{1}{16}$
	DEC. 9TH	DEC. 2ND		
FORWARD POSITIONS—	SMOKED SHEET s. d.	CRUPE s. d.	SMOKED SHEET s. d.	CRUPE s. d.
1931, December	0 3	0 3 $\frac{1}{2}$	0 2 $\frac{7}{8}$	0 3 $\frac{1}{16}$
1932, January	0 3	0 3 $\frac{1}{2}$	0 2 $\frac{1}{8}$	0 3 $\frac{1}{8}$
„ January/March	0 3 $\frac{1}{8}$	0 3 $\frac{5}{8}$	0 3	0 3 $\frac{3}{8}$
„ April/June	0 3 $\frac{3}{8}$	0 3 $\frac{3}{8}$	0 3 $\frac{1}{2}$	0 3 $\frac{1}{2}$
„ July/September	0 3 $\frac{3}{8}$	0 3 $\frac{9}{16}$	0 3 $\frac{5}{8}$	0 3 $\frac{7}{8}$
„ October/December	0 3 $\frac{1}{2}$	0 3 $\frac{1}{8}$	0 3 $\frac{1}{8}$	0 3 $\frac{9}{16}$

STOCK—		1931 TONS	1930 TONS
London, Week ending, Dec. 5th		72,904	76,877
Liverpool	„ „	56,901	40,349
Total		129,805	117,226

SINGAPORE QUOTATIONS—

Dec. 9th. — Spot, 9 $\frac{3}{4}$ cents, January/March, 1932, 10 cents; April/June, 1932, 10 $\frac{3}{4}$ cents.

Dec. 2nd. — Spot, 9 $\frac{3}{4}$ cents, January/March, 1932, 9 $\frac{1}{4}$ cents; April/June, 1932, 10 cents.

Balata.

This market is quiet with West India sheet quoted at 1s. 8d. to 1s. 9d. against 1s. 8d. c.i.f. sellers price for shipments while Venezuelan block at 11d. to 1s. on the spot is nominal and so is the quotation for shipment at 10 $\frac{1}{2}$ d. to 11d. c.i.f. On the spot, Panama is valued at 1s., and Iquitos at 3d. to 4d., but in the absence of actual business all these rates are nominal.

Coffee.

Among the guests of honour at the twenty-first annual convention of the American National Coffee Roasters' Association, which was held in Chicago at the Hotel La Salle, were Dr. Sebastiao Sampaio, Consul-General for Brazil in New York, and Señor Miguel Lopez, the New York representative of the National Federation of Coffee Growers of Colombia, and each spoke on behalf of the planters of his country. Sr. Lopez referred to the need of grading and classifying the coffee and the opposition that the wish to do so had called forth from the "old brigade," who find it difficult to change and fear that this mania for standardization would "put them out of business." Eventually it is hoped that the coffee growers' association in Colombia will overcome such opposition and do away with any uncertainty through lack of uniformity, in trade interpretations, terms of contracts, standards of quality, etc.

Dr. Sampaio spoke emphatically on the low returns that he claimed the growers in Brazil were securing. The planters in Sao Paulo, he said, at present (end October) coffee prices are not getting even two cents a lb., and the situation of the growers in the States of Rio and Espirito Santo is even worse. To remedy the evil of unremunerative prices, new planting is being discouraged and every effort possible is being made to adjust the cost of production, whilst he joined hands with Señor Lopez in urging the American market to recognize quality in the coffees sent them by paying more for the better grades.

Discussing the destruction of coffee rather than using the beans for propaganda purposes in China, Russia, India, etc., the Consul-General for Brazil reminded those present that the use of coffee in these countries to any useful extent must take time, "inasmuch as it is a product which requires knowledge and practice in its preparation."

The *Tea and Coffee Trade Journal* of New York in its November issue devoted pp. 484-489 to an exhaustive report by Mr. J. W. Millard, Director of Research of the firm of Erwin Wasey and Co.

of New York on "Present Coffee Trade Conditions Analysed." Here we are told that increased demands are due to increased populations, and the population growth in the U.S.A. has slowed down amazingly. "The top figure of our population is now in sight, whilst the huge productive capacity of Brazil with its gigantic surplus is an ever-impending danger to the coffee trade." Until the surplus which has caused the extremely low level in prices of late years is removed, prices will remain low. In the past five years, members of the American coffee industry have spent considerably in excess of \$100,000,000 in promoting their individual coffee businesses, and all this money is threatened by conditions to-day. Yet a revival of interest in the brewing of good coffee should bring about an increase in consumption equivalent to about one demitasse daily for each American over 16 years of age, or a 0.22 per cent. increase in the business done from planter to retailer.

The second weekly set of auctions during December met with a brisk demand and therefore a good market. This caused Kenya and other kinds to sell at higher rates, which in the case of Costa Ricas reached as high as 5s. to 10s. at times. Business done included the following:—

Kenya.—Smalls 65s. to 82s., seconds 71s. to 113s., bold common 82s. 6d., fair 92s. 6d. to 108s., good 113s. to 134s. 6d., fine 137s. to 150s., peaberry 135s. to 159s.

Tanganyika.—Smalls 64s. 6d. to 71s., medium 87s. 6d., seconds 79s. to 91s., bold, fair, greyish and greenish 100s. 6d., to 109s., bold, good, greyish and greenish 109s. 6d. to 115s., fine 133s. 6d. to 152s., peaberry 98s. to 151s. 6d.

Uganda.—Bold common to good greyish and greenish 55s. to 88s. 6d., bold fair to good greyish and greenish 82s. to 91s., seconds 56s. 6d. to 70s. 6d., peaberry 78s. to 82s. 6d. Of Robusta kinds, bold realised 43s. to 49s.

Costa Rica.—New Crop bold fair colory and greenish 110s. to 128s., seconds 82s. to 95s., smalls 53s. to 90s., good 130s. 6d. to 133s. 6d., peaberry 110s. to 131s.

Old Crop.—Bold fair, 121s. to 129s., seconds 68s. 6d., smalls 70s., bold colory 148s., fine bold colory 148s., 148s. 6d., seconds 101s. to 117s. 6d., peaberry 129s. 6d. to 145s.

Colombian.—Medium greenish 86s. 6d., bold good greenish 107s. 6d., seconds 66s., small 70s. 6d., peaberry 10s. 6d.

Peruvian.—Medium 98s., bold greyish 109s.

Mexican.—Bold greenish 121s. 6d.

Cotton.

The immediate result of Japan's going off the gold standard and the improvement at the same time of the £ rather disturbed the manufactured cotton market. It was feared that orders from China would go elsewhere and those from India as well since their offers are impossible to accept. Apart from the matter of price, the political outlook

in India is decidedly disturbing and buyers are moving more warily. On December 14 the £ was worth 14s. 2½d., the Yen 2s. 1d., silver just under 20d. an oz. and gold had just fallen 4s. to 118s 9d. per ounce fine.

Cotton of Manchester, quoting American sources of information, pointed out that the 1931 cotton crop season in the United States has been extraordinarily favourable for the production of cotton. Planting conditions were generally favourable and spring weather retarded weevil propagation. On August 1 the very high condition of 74·9 per cent. of normal was reported and weevil infestation was considerably below average as on that date the crop was forecast at 15,584,000 bales. During August growing conditions were generally favourable except in the Delta sections of Arkansas and Mississippi, where excessive stalk growth was accompanied by poor fruiting and increased weevil infestation. On the other hand, abandonment was reported to be less than average and the forecast as of September 1 was 15,685,000 bales. The month of September proved exceptionally favourable, particularly in Arkansas and Mississippi. Hot dry weather held weevil damage in check and hastened maturity of the crop. The forecast as of October 1 was 16,284,000 bales. October weather was also much more favourable than usual, high temperatures favoured opening of the bolls and there was a general absence of injurious rains. Picking progressed with little interruption and field loss was held to a minimum. By November 1 the estimate had increased to 16,903,000 bales of 500 lb. and on December 1 to 16,918,000 bales, against the record output in (1926) of 17,977,000 bales.

Meanwhile mid-December found the Bears dominating the market with the heavy supplies of raw cotton and the meagre demand for the manufactured article lined up to help them.

This is not surprising, in face of the rumours that the U.S. Farm Board and the Co-operative Associations between them talk of holding 7,000,000 bales of cotton off the market. If they do and prices, when the next sowing comes along, are no better, one feels bound to believe that the most optimistic of farmers will drastically restrict his output. One rather wonders what will happen to the sugar now being held off the market. Cotton, except for some risk of fire from spontaneous combustion, should turn out far more satisfactorily after a long hibernation (the winter of our discontent at prices) than the stored sugar can ever hope for. By the way, can such holdings be insured at reasonable rates against fire due to the storage, and especially from deterioration and even of damage to buildings or other goods?

Summing up, the American reports say that, according to advices to hand little cotton will be left in the fields. Whilst this is contrary to expectations, the inference to be drawn is that growers have taken full advantage of the U.S. Farm Board's

loans for holding the present crop, realizing that a continuation of the prevailing low prices will add support to the recent legislative efforts for acreage restrictions. Meantime, many may feel distrustful of Government interference, but with only limited finance believed to be available for the planting of the next crop it is apparent that the acreage question will, during the next few months, become an important factor in the price situation.

The following were the official "Spot" prices in Liverpool on December 11 and on the corresponding dates in 1930, 1929 and 1913:—

	1931	1931 LAST WEEK	1930	1929	1913.
Middling American	5·21*	5·14*	5·44*	9·59*	7·34†
Strict Middling American	5·31*	5·24*	5·59*	9·79*	7·46†
Fair Pernam	5·16	5·14	5·59	9·24	7·55
F.G.F. Sakel. Egyptian	7·30	7·20	7·80	14·40	10·75
Fine Broach	4·97	4·77	4·25	7·85	6½
Fine No. 1 Oomra	4·82	4·62	3·85	7·20	6½
Fine Bengal	4·62	4·42	3·55	5·85	5½

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.

Other Products.

Tea continues to be the one bright star in the heavens (or otherwise) of commerce. If there are others equally bright, they have not twinkled our way of late. The Indian market for instance is described as being strong with an active and well-distributed competition. The bidding for Ceylons has been carried on with animation; leaf parcels in particular attracted attention and ruled distinctly dearer. Java and Sumatra parcels did not do quite so well, their results being only fairly good. Teas up to 7d. lb. realized steady rates, but lots above that figure are said to have shown slight irregularity at times. This shows of course that British tea stars twinkle the most.

Moving on to fibres, jute as usual of late has plenty to say for itself and that means things are not too bright with it, for when jute is busy, jute doesn't talk. Has the idea of making sacks of No. 2 and 3 quality sisal frightened the jute kings, or is the tendency to ship in bulk and dispense with bags becoming annoying? In any case trade continues to shrink and Calcutta does not seem to be helping the market, nor does the political unrest. As with other crops, the statistical side is good, but the sales are not, although November is said to have been a good selling month and manufacturers have done better. Probably owing to the depression generally; we are unable to quote higher rates this month (still remembering that we are off the gold standard), current prices being £21 12s. 6d. c.i.f. to the Continent for firsts, against about £23 a month ago. Owing to the much larger quantities afloat to date (300,045 bales, against 104,323 a year ago) the receipts and arrivals expected at Dundee are 482,169 bales, against 245,663.

Moving on to Manila hemp, their receipts are much smaller; the returns show 997,000 bales to December 17, against 1,241,000 bales in 1930 and 1,478,000 in 1929. No wonder therefore that

one hears of no pressure to sell, especially as prices are barely steady, J. No. 2 being £21, against £21 5s. last month, and K. £20, against £20 5s., whilst M. No. 1 which was £19 10s. is now £19, all c.i.f.

Moving on to sisal, No. 1 f.a.q., is quoted at £17 for November/January, up to £17 15s. (sellers) for February/April, all c.i.f., with Mexican sisal G.W. £16 10s. c.i.f., to good European ports. Shellac seems steady at 77s. 6d. for TN on the spot, 95s. to 170s. for Fine Orange, 90s. for AC Garnet and 100s. for R.L.I. button lac against 80s., 92s. 6d. to 170s., 87s. 6d. and 97s. 6d. respectively a month ago. Palm kernels at £12 2s. 6d. c.i.f. Hamburg show a drop of 2s. 6d., whilst Tin with firmer advices and no selling pressure has reached £137 to £137 5s. for standard cash, against £4 less

before, and copper is unchanged at £37 10s. to £37 11s. 3d. for cash.

Coming to finance, Japan moving away from the gold standard has attracted attention. In London the price of silver on December 22 stood at 20 $\frac{7}{16}$ d. and gold at 122s. 1d., whilst with bank rates, Germany's drop from 8 per cent. to 7 per cent. is the only change to register. London therefore stands at 6 per cent., Berlin and Milan at 7 per cent., New York 3 $\frac{1}{2}$ per cent., Amsterdam 3 per cent., Paris and Brussels 2 $\frac{1}{2}$ per cent. and the Swiss banks at 2 per cent. Our usual table runs thus:—

DECEMBER 19	1931	1930	1929
Bank rate	6 per cent.	3 per cent.	6 $\frac{1}{2}$ per cent.
Consols 2 $\frac{1}{2}$ p.c.	53 $\frac{1}{2}$	57 $\frac{1}{2}$	54 $\frac{3}{4}$
Bar silver per oz.	20 $\frac{7}{16}$	15 $\frac{1}{4}$	23 $\frac{1}{8}$

THE WORLD'S COCOA MARKET.

West Africa visits the West Indies.

BY THE CONTROLLING EDITOR

"CHOCOLATES and other sweets are mostly imported into China to arrive in October or beginning of November to last the whole winter," so Walter Buchler tells us in his article on "Confectionery in North China," in the *Confectionery Journal*. "Chocolate covering is mostly sweetened and costs \$1'40 to \$1'60 a lb., packed in blocks of 7 to 10 lb. Formerly the price was 60 to 70 cents. a lb. for a minimum quantity of a case of 100 lb. British, American, as well as Swiss and German makes are sold in this market. In place of unsweetened chocolate covering, firms use cocoa powder for general confectionery requirements, as cocoa possesses a strong dark colour when mixed."

All this is very interesting, but however have the shippers to North China managed to double and more than double the price, whilst both raw cocoa and sugar tend lower from an already over-low level? What a market to exploit; who can give us a few addresses of such buyers?

Can the rise in price be due to reasons that, unfortunately, benefit no one, for a little earlier in the article we are told, "The increase in the import duty and the low value of the Chinese dollar [about 16d. instead of 28d.—ED., TROPICAL LIFE] due to the depreciation in silver has given a fillip to local manufacture and sent up the price of imported commodities. Assorted chocolates formerly cost \$1'50 to \$2 lb. (\$1 = 2s. 4d.), to-day they are up to \$3 to \$4 lb. and so one fears this is the explanation for what at first sight seemed to be a bright market where prices had gone up instead of down.

Gold v. The Golden Bean.

The following note came to hand too late to include in last month's issue. "A propos of p. 218 in your November issue concerning the likelihood

of gold cutting out the golden bean in the near future, I enclose a page out of the *Daily Mail* of November 25, p. 7, and commend the article, 'New Gold Era for the Gold Coast,' to the attention of your cocoa friends. With gold at one time touching 125s. an oz. the remarks have much in them worth pondering over especially the items underlined." Here are one or two extracts only. "The Gold Coast, which has produced £30,277,000 of gold in forty years, is attracting renewed attention, especially in view of the introduction of more economical methods of working . . . the considerable reduction in costs during the last year or so, renders it possible for the lower-grade ores to be profitably treated" . . . "shortage of labour and high working costs in the past, only allowed of the higher grade ores being treated" . . . "Health conditions have improved and the opening up of the country for motor transport has eliminated many old time troubles." Evidently the gold and the transport are there, and the latest machinery can be had for the asking and payment. All that is necessary will be ample labour supplies. These it is felt can be obtained in full supply from the cocoa areas which are not paying the natives as they feel they ought to, so the query remains, will the gold-mining industry in the Gold Coast be developed, and if so will the extra labour supplies needed be drawn mainly from the cocoa producing areas? "Without doubt," we are told, "there is a great future for the (gold) industry if worked on sound modern lines. The possible tonnage is very considerable and the treatment is simple."

Turning from the golden mineral to the golden bean we would first like to draw attention to the remarks made by Dr. Sampaio, Consul-General for Brazil in New York—when discussing the best

means for increasing and rendering more steady and so more permanent, the consumption of coffee (see p. 16)—when he referred to the low price of the article through all grades and urged that now was the time to push consumption. This being so with coffee it certainly is the same with cocoa, and equally pungent is a further remark about the need of educating buyers up to the advantage of paying more for the better and best qualities, thus helping to improve the attractiveness first of the raw product and, through that, of the finished article. It was claimed by the Colombian delegate at the same meeting (of U.S. coffee men gathered together in Chicago) that there is still an enormous opportunity for an increase in the consumption of coffee in the United States. No doubt there is, but if such a vacuum exists why should it not be filled at least in part with cocoa? Whatever has poor cocoa done that there are no champions such as coffee has, to stand up and make the same emphatic statements in its favour, urging one and all to consume more cocoa, especially with milk?

Reverting back to efforts being made or discussed to give West Africa other strings to her bow, the letter that Mr. W. Addison (of long experience on the Coast) wrote to *The Times* early in August should dispel all the doubts and prejudices that exist sufficiently to retard progress so far as fruit growing is concerned. To confirm all that Mr. Addison claims, a tropical agricultural expert of far-flung experience wrote me quite recently: "I am and always have been curious to ascertain why the Gold Coast Government has not taken some action with regard to the fruit-growing proposals. Even supposing (which you have no right to do) that the wilt trouble appeared, then they could interplant cocoa, as has been done elsewhere and then have properly laid out cocoa estates. There is no doubt that West Africa is an excellent centre (in suitable areas) for banana as well as citrus plantations, but it must be done on a big scale, as indeed everything must be done in these days."

An old "Friend" of TROPICAL LIFE, Mr. W. M. Malins-Smith, read a useful paper on "Sanitation in the Cacao Field," before the Agricultural Society of Trinidad, which he ended by saying: "A cacao field to be in a good sanitary condition should have no more than eight immortelle shade trees to the acre and these should be young and healthy and free from foreign growths. The soil in such a field is well drained and in good tilth, having only soft weeds and grasses. Under these conditions, the trees root deep and there is no 'beeshay'; and the crop will be as satisfactory as it possibly can be in a cacao field that is not fertilized."

"Beeshay," we were told earlier in the paper, is a local name given to a sieve-like system of roots of the cacao tree formed at the surface of the soil under conditions of compacting or lack of tilth together with a large supply of decaying vegetable matter lying on the surface. Under such a state

of "beeshay," the field suffers considerably in a drought, for there is no conservation of subsoil water and the tree has become for all practical purposes a pure surface feeder. In a very wet rainy season there is a tendency for the tree to turn over and fall, due not primarily to neglect of severe pruning, but to too much surface rooting on account of lack of tilth and sufficiently deep drainage.

U.K. Consumption Down.

The deliveries for home consumption in the U.K. have "let us down," if that is the correct slang for such a calamity. We still have, however, nearly 3,400 tons to the good, so do let us work to make December an "increase" instead of another decrease. It will be better to have 5,000 tons increase for the year, although we would like 10,000, rather than show a deficit. Dealing with the figures themselves during November, the U.K. imported 1,842 tons only, including 1,417 B.W.A. against 2,970 and 2,584 tons respectively in 1930 and 1929. Coming to H.C. we took 4,537 tons against 5,559 tons in November, 1930 and 4,752 tons in 1929. This shows therefore a drop of 1,022 tons compared with 1930 and 215 less than 1929. For the eleven months the figures run thus:—

Board of Trade Returns for the U.K.

JANUARY—NOVEMBER, 1931 = 11 MONTHS.

RAW COCOA ONLY JAN.-NOV.	LANDED TONS	INCI. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK NOV. 3
1929	64,477	56,723	53,531	10,043	22,350
1930	54,105	46,471	52,897	3,704	27,150
1931	57,252	49,368	56,295	4,244	24,850

Inc. 3,147 Inc. 2,897 Inc. 3,398 Inc. 540 Dec. 2,300

Why Consumption is too Low.

In this age when science is so keen to put synthetic foods before us to eat, and since milk cocoa products have become the main support of the industry, at any rate with eating chocolates, cannot we push the sale of milk cocoa powder more extensively? On our table is a tin from one of our leading makers, containing a mixture that has become vastly popular of late, viz., cocoa, malt, milk, eggs. If this mixture can be put on the market with such success surely a mixture of cocoa powder and milk only would sell equally well. One urges the use of such a mixture as both the cocoa and milk are good for us all: children to nourish and build up, and adults to sustain and keep going. What should be done is for the planters to run a joint campaign in England with the cocoa manufacturers and the wealthy milk combines, urging a greater consumption of cocoa and milk powder as a time and trouble saver, whilst being a food stuff of great nourishment at a low price.

Reports just now are busy telling us how much better nourished are the children in Jewish families;

they use cocoa with milk, not once but three times a day. Surely all children, even if their parents do not trouble about them, want to be equally well nourished. Let us see to it therefore that children are helped to secure such a beverage as often as possible. This is not the paper to carry on such a propaganda as we do not get at children at home or in the schools, on "the hike" or in camp, but there are plenty of journals that go right to them; papers too that are not costly to advertise in, or to get educational articles on foods published in them. Planters therefore should combine, and at least start some such modest scheme of propaganda until the tide turns and cocoa comes into its own again and justifies the big scale propaganda which we had hoped to see running by now. One good piece of news refers to Lieutenant-Colonel Levey. Although the Gold Coast Government Bureau is to be closed (may one add, for a time) we understand that its director will still be on the spot ready and anxious to act as *liaison* officer between the Gold Coast producers and the trade over here. If this is correct it will be a great help at times in many ways.

We believe it was a recent report of the Empire Marketing Board which claimed that milk is the cheapest source of high-grade protein and *when fed with other foods* (italics ours) in right proportions has a specific influence beyond its caloric value, especially on growing children. As far as experiments have shown, pasteurized milk has the same food value for adults as raw milk, save that some observers have found that vitamin C is destroyed. This vitamin is, however, easily replaced by adding small quantities of orange or swede turnip juice. For children under the age of 6, raw milk might hold a definite advantage.

Further, we are told that the sale of milk by volume clearly results in under-payment of the farmer who produces milk rich in fat and casein. In New Zealand and Holland dealers pay for milk on the basis of its butter fat content, but it is suggested that payment would much more fairly be made on both casein and fat. The new system of payment might be worked out in consultation with representatives of milk producers and dealers, and the purchasers would pay for what they really want, i.e., the nutrient contents of the milk. If this method of payment could be adopted, prosecutions for adulterated milk would be rare, since watered milk would fetch a considerably smaller price than normal milk; and if such a system were in practice, and normal milk were used on a large scale by the general run of cocoa manufacturers and not only by one or two leading ones, they, and the public also, would feel more certain that they were receiving the utmost nourishment in their cocoa and milk.

Mr. Knapp sends Christmas Greetings.

Right here, the postman hands us a missive over the top of the desk; it is a card from Mr.

A. W. Knapp of Messrs. Cadburys, who is wandering around West Africa, keen and busy as ever learning things. This is what he says, together with a reproduction of the other side of the card on which he says it: "Salt Pond, Gold Coast Colony. November 29, My very interesting six weeks on the Gold Coast is nearly over. I am now proceeding to Nigeria. My visit has strengthened my admiration for the inhabitants of the Gold Coast. I take this opportunity of sending you my best wishes for Christmas and the New Year.

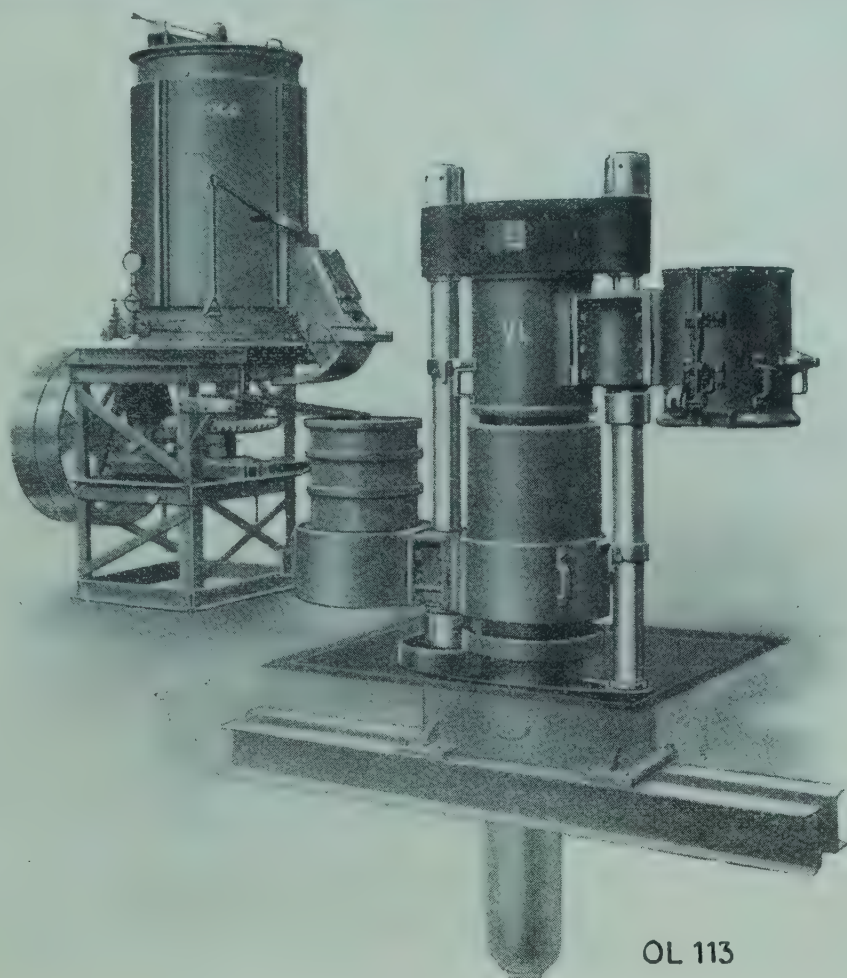
(Sd.) A. W. Knapp."



MR. A. W. KNAPP'S CHRISTMAS CARD.
On a Cocoa Estate in the Gold Coast.

West Africa in the West Indies.

It was good news to read that the Director of Agriculture in the Gold Coast was in Trinidad (West Indies) towards the end of October. Nothing but good can come from such visits especially as the points mentioned in this month's notes were brought forward and discussed. With the several changes that must take place and are taking place



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in West Africa, the Gold Coast in particular, and the movements in the labour forces there that such changes may bring about, it is of the utmost importance that the Directors of Agriculture should occasionally visit each other as on this occasion when the local Agricultural Society of Trinidad and Tobago convened a special meeting for their members to meet Mr. Auchinleck. The meeting took place on October 29 and lasted nearly two hours. With Trinidad, not only was the Director of Agriculture, Mr. E. J. Wortley, present, but also Mr. Geoffrey Evans, Principal of the Imperial College of Tropical Agriculture out there; Mr. James Forbes, Manager of the Cocoa Planters' Association and other prominent and useful men having to do with the production and export of the islands' cocoa also attended the meeting.

Points to be noted in Mr. Auchinleck's address were: In 1923, the Gold Coast produced 240,000 tons of cocoa and in 1930, 270,000 tons.¹

Looking for larger estates than the average of $2\frac{1}{2}$ acres they found, with some trouble, one holding of 20 acres. An old estate of 300 acres had been broken up into small holdings. The $2\frac{1}{2}$ -acre holdings produced probably on the average 12 cwt. of cocoa per annum.

¹ What returns official or otherwise show such figures? Those published in TROPICAL LIFE are of course for export only.

He (Mr. Auchinleck) had never seen any manuring, tillage, forking or pruning being carried on in the Gold Coast, where he also considered the drainage was very elementary. In some farms about 70 per cent. to 80 per cent. of the pods had black or brown pod disease. The conditions of moisture which were good for cocoa were also good for fungi. On some farms they got yields as high as 18 cwt. or 19 cwt. per acre. [Were these, one wonders, lands free of pests and diseases and if so, realize what the 1,100,000 acres under cocoa owned by 460,000 owners, men and women, with an average area of $2\frac{1}{2}$ acres each would yield, if in "apple-pie" order. We make out that even 1,000,000 acres at 18 cwt. each are equivalent to 900,000 tons of cocoa. Think of that. What is the cause of our getting 270,000 tons as a maximum only? Is it due to lack of labour and will, but mainly labour, to keep all the trees free of pests and so fit to give full crops?—ED., TROPICAL LIFE.]

Considerable sums of money were advanced by the buyers, around £15,000,000 a year. Thanks to such firms as Cadbury, Fry and Lyons demanding quality cocoa, a reputation has been established and made use of so that, in every case where the farmers produce a better-grade cocoa, acceptable by these firms, they receive a bonus of 1s. 9d. per load of 60 lb. And there we must stop, but it must have been a useful meeting.

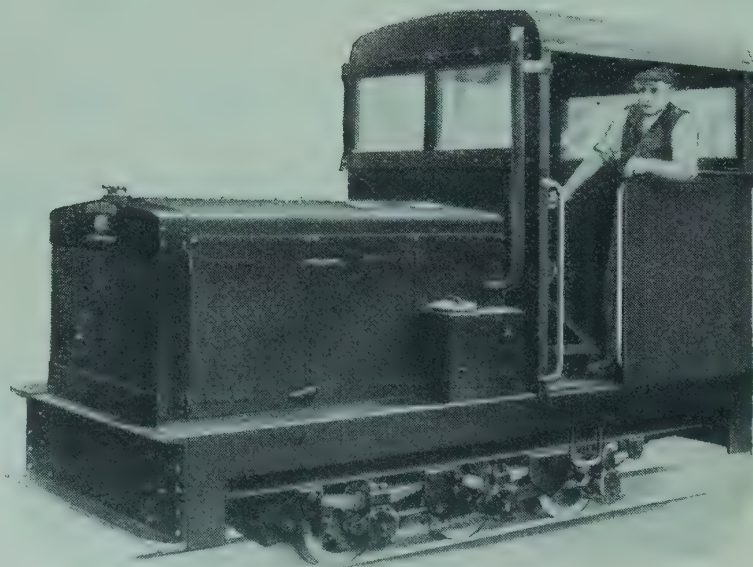
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STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	$2\frac{1}{2}$ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	$2\frac{1}{2}$ Tons
12/16	$3\frac{1}{4}$ "
20	$2\frac{1}{2}$ "
20	4 "
27	5 "
50/70	10 "

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IN TOUCH WITH EVENTS

Colonel F. E. Fremantle, M.D., M.P., was the guest of honour of the Royal Empire Society at a dinner at the Hotel Victoria on Tuesday, January 19th. Colonel Sir William Willcox, K.C.I.E., M.D., presided over a well-filled room. After the dinner Colonel Fremantle addressed the Fellows and their friends on "The Debt of the Empire to British Medical Research."

* * *

Colonel Sir Weston and Lady Jarvis, assisted by Sir Granville and Lady Ryrie, received the guests at an Australia Day Celebration, organized by the Royal Empire Society, at Australia House, for January 26th. The Reception lasted from 9-10 p.m. and Dancing from 10 p.m. to 2 a.m.

* * *

Is it true that Italian hemp is used in the Navy, if not for the Mercantile Marine, because it "takes" tar so satisfactorily? Has the Empire no fibre, produced in quantities, equal to the Italian product that absorbs tar equally well to please the authorities, at a price as moderate as that of Italian hemp?

* * *

Lovers of Puccini's opera "La Bohème" may (or may not) be glad to know that the real Mimi did not die young; she lived to retail vegetables from a barrow, whilst Musette married a chemist, and the third girl only continued to follow the oldest profession in the world. Was there an original, one wonders, to Marguerite Gautier, La Dame aux Camélias, and if so, what became of her?

* * *

The Gold Coast Commercial Intelligence Bureau, as a Government office, closed on December 26th, but Lt.-Col. J. H. Levey, who was for so many years in charge, has opened another bureau called "The Gold Coast Information Bureau, Ltd.," which has the full support of the Gold Coast Government, apart from financial assistance. His new premises are at Criterion Buildings, Piccadilly Circus, W. 1., telephone: Whitehall 5820, and an annual charge must be paid by those firms requiring the services of the Bureau. The amount charged will depend on the services called for and rendered.

Recent Press reports tell us that a conference of representatives of the National Food Canning Council and the Council of the National Farmers' Union held in London agreed upon a basis of co-operation between the growers of fruit and vegetables and the canners, which will involve a big increase of the acreage under production.

The canning industry has made such progress in the past two years that its chief problem is now to assure a constant supply of the best quality home-grown fruit and vegetables in sufficient quantities.

* * *

Can it be true? "We have destroyed 21,000 pigeons in the City of London since we started in 1927," an official pigeon-killer told the *Morning Post*. "They are all destroyed in the City's incinerator, being of no use for food: even the Lascars will not buy them. The birds get no grit nowadays and they are all oil and petrol, inside and out."

* * *

It is reported that the first modern British sovereign was struck on January 14, sixty-one years ago, i.e., in 1871, with its well-known reverse of St. George and the Dragon which was formerly used until, in the reign of William IV, a coat-of-arms was substituted for a time.

* * *

Mr. Malcolm Ross, of Grahame House, King's Road, Tanga, T.T., whose name has been prominent more than once in this paper in connection with sisal, writes to say that on March 1st, at 10 a.m., he will offer for public sale the important and attractive freehold estate known as "Derema-Amani" in the Usambara Mountains, Tanga Province. The property is 50 miles from the Coast and 25 miles from the railway station at Muhesa. The famous research station of Amani forms one of the boundaries. The altitude is 3,500 to 4,000 feet, average rainfall 70 inches, area 26,000 acres or nearly 43 square miles. There are 200 acres of mature coffee, *arabica* and *robusta bukobensis*, with factory and plant by Gordon of London. Most crops from tea to sisal can be cultivated. There is a comfortable manager's house, four houses for assistants, offices, and other buildings.

It is estimated that the total value of the food-stuffs which were lost through the floods in China amounted to £50,000,000, sufficient to feed 18,000,000 for one year. This works out at about 55s. per head, so evidently it does not cost much to feed people in some parts of the world.

* * *

At a meeting of the tobacco planters in Rhodesia an agreement was arrived at to form an association to develop the home tobacco markets—consuming especially—for inferior leaf. As north of the Zambesi, some 46,000,000 natives under the British flag alone are said to consume 31,000,000 lb. of United States grown tobacco a year, and the consumption generally is going ahead by leaps and bounds, a well organized campaign to preach aggressively the gospel of “buy home tobacco” should become a great success, especially as it should be able to give the natives better tobacco at less cost than that gathered in and brought all the way from America.

* * *

Among the names included in the New Year's Honours List were Dr. Henry S. Wellcome, LL.D., “Our Friend” last month, on whom the honour of knighthood was bestowed, and Her Majesty Queen Salote Tubon, Queen of Tonga, who was made an Honorary D.B.E. According to “Whitaker's” the name is Queen Salote who succeeded the late King George Tubon II, in 1918. It was two of the smaller islands of the Tonga group which disappeared in 1919, owing to a tidal wave. The group is about 390 miles from Fiji, and had a total population of 27,532 in 1929, of which 440 were Europeans. Nukualofa, on the Island of Tongatabow, is the seat of government.

* * *

Chicago and New York have evidently been badly maligned when considered to be the most murderous cities of the world. We must own that it was our opinion of them (judging by published reports) with Chicago as an easy first. According to Dr. Kenneth Barnhart of the Southern College, Birmingham, Alabama, these two cities, especially New York, have comparative Angel Pavements compared with other places who apparently shoot more but make no talk about it. Certainly the doctor characterized the U.S.A. as being “the most murderous country in the world,” and yet, when worked out on a percentage of the town or city's total population, New York stands 78th in the list of 174 cities and Chicago 40th. Memphis, Tennessee, stands first at 58·8 of murders per 100,000 population; Atlanta, Georgia, is second with 52·6, and Lexington, Kentucky, third with 52·4, against 7·1 only for New York and 14·4 for Chicago.

The annual fibre report of Messrs. Wigglesworth & Co. Ltd. for 1931 has just arrived. This shows the following estimated production of hard fibres during the past three years:—

	1931 TONS	1930 TONS	1929 TONS
Philippine Manila	136,000	162,000	195,000
Philippine Maguey	6,700	11,450	16,250
Mexican Heniquen	70,000	104,000	101,000
African Sisal	88,000	76,000	70,000
N.E.I. Sisal and Cantala	66,000	55,000	52,000
N.E.I. Manila	10,000	10,000	—
Cuba and Haiti Sisal	6,000	4,000	3,000
Jamaica Sisal	100	300	500
Bahama Sisal	250	300	500
N.Z. Hemp and Tow	3,135	11,650	14,000
Mauritius Hemp	500	1,300	2,400
Total	381,685	436,000	454,650

In 1928 Mexico's production was put at 127,000 tons, and the Philippines 175,000 tons, out of a total for all growths of 435,992 tons. The drop in the outputs of the Philippines and Mexico is noteworthy against the increases elsewhere. Of soft fibres, the reduction of the area planted to jute is very noticeable, it having been reduced by one-half, bringing down the crop from 11,000,000 tons to 5,500,000 tons. Makers of baling presses should note that in some cases 300 lb. bales have been substituted for 400 lb. bales, which should be a decided advantage to those who object to the overpressed bales.

* * *

According to H.M. Senior Trade Commissioner in India, in his survey of the Import Trade of that country during the six months ending September 30th last, the imports of electric fans and parts thereof fell from Rs. 15 lakhs to Rs. 9½ lakhs, the United Kingdom share being reduced from Rs. 9 lakhs to Rs. 5¾ lakhs, that of Italy from Rs. 4 lakhs to Rs. 2 lakhs, and the U.S.A. from Rs. ½ lakh to Rs. ¼ lakh. Of oil-crushing and refining machinery the imports for the six months rose from Rs. 14·3 lakhs to Rs. 25 lakhs, sugar machinery eased from Rs. 9 lakhs to 7·5, tea machinery from Rs. 6·8 lakhs to 3·7, and jute machinery from Rs. 55 lakhs to 15 only.

* * *

The imports of motor cars, including taxis, are not without interest as showing the drop in the value per vehicle. We can only give a curtailed list, say:—

APRIL-SEPTEMBER	VEHICLES	1930	VEHICLES	1931
		VALUE Rs.		VALUE Rs.
All Countries including	5,449	1,19,47,594	4,245	82,70,021
U. K.	987	25,38,036	717	17,10,621
Canada	1,590	27,68,583	637	9,45,685
U.S.A.	2,250	51,54,261	2,382	44,44,300

If the above “lay out” of the figures puzzles you remember that India calculates and writes down her values as follows:—

Rupees one lakh (Rs. 1,00,000) = £7,500 at 1s. 6d. exchange. Rupees one crore = Rs. 100 lakhs or Rs. 1,00,00,000 = £750,000.

(1) Work in every Yucatán Sisal plantation, as well as on any farm or plantation in the rest of Mexico, is absolutely free, and well paid. The working man may go and goes where he is paid better and suits him best.

(2) Mexico's political organization and, consequently, that of Yucatán is one of the most advanced in the world, all elections being held by popular vote, and all working men over 21 years of age exercise their right to vote the same as any other Mexican citizen does on all elections for local and federal authorities.

(3) The surname of Peón pertains to one of the most distinguished and numerous families of Yucatán, especially. Many of the present members with this surname have been educated in English colleges and universities. Many of the members of the Peón family have been and are, large land-owners, in fact, one of the most important Sisal Growers, if not the most important, in Yucatán to-day is Don Augusto L. Peón, uncle to Don Rafael A. Peón, who wrote you the letter in question. There is no mystification therefore in the name of Peón, as you and your advisers, through ignorance or malice, deem to presume of this surname of Don Rafael A. Peón.

From all that I have been able to glean from your paper and from the opinions expressed by you to me I seem to deduct that your paper is more devoted to the defence of private interests than of general interests to which all serious publications must be devoted.

Yours faithfully,
M. DIAZ DE COSSIO.

Here is a reprint of the (first) letter of Senor Rafael A. Peón, of Mérida, Yucatán, México, October 10th, 1931:—

To the Editor, TROPICAL LIFE, London, W. 1.

DEAR SIR,—The reading of your interesting Magazine is always the source of much pleasure to me as I invariably find one or more articles of vast interest to us, the *yucatecos*, who are vitally interested in Sisal, its growth and cultivation here and abroad.

The September number of TROPICAL LIFE has just come to hand, and your editorial entitled "Sisal—British v. Mexican" has drawn my attention to such a point, that I am unable to resist the desire of writing you this letter for the purpose of clearing up, to the best of my ability, certain statements made in your article.

In the first place, referring to the discussions that took place at the meeting of the East African Sisal Producers and Importers Sub-Section of the London Chamber of Commerce, you make special mention of "the abolition of taxes and other burdens on Mexican Sisal." The members of this Sub-Section of the London Chamber of Commerce could not be more in error in this respect. No

abolition of taxes whatever has been made on Sisal; very much to the contrary, since July last additional taxes and burdens have been imposed on this industry. With this point cleared up for your better information, I will attempt to demonstrate to your good self and to the members of the Sub-Section in question, that all of us concerned, *henequeneros* and Maya Indians, are contributing in the sphere of our resources, to make the present chaotic situation of the sisal industry as little distressing as possible under the circumstances.

The Maya Indian lives generally on the plantation proper, in a house supplied absolutely gratis by the *henequenero*. He has at his command all the land he needs to raise his corn, beans, and other vegetables in sufficient quantities for his maintenance; besides, he invariably raises poultry in good numbers, a few pigs, and in many instances owns a horse or two for his own use. The Maya Indian needs very little, besides what he raises for his everyday necessities, which makes him to a certain extent independent of the cultivation of hemp. In other words, he could make a living, or, as you would say perhaps, he could live if he wished to without working on a plantation.

Regarding the *henequeneros* or plantation owners, they could not be more forbearing and resigned to the prevailing conditions. They dispense with the services of a manager or administrator, and personally handle the intricate affairs inherent to a large plantation, and are contented with merely obtaining a revenue equivalent to the wages they would pay the said administrator, without taking into consideration the interest on the enormous capital invested in their plantation. Due credit should be given in this respect to the *henequenero*, but unfortunately such is not the case in the editorial article under question.

The world-wide depression has caused, as you know, a great reduction in the price of sisal, brought about by a considerable decrease in the consumption of the fibre. It is during these trying days for Yucatán that the *henequenero* has shown his patriotism and self-restraint by adopting extreme measures of economy by reducing personal expenses to the minimum and re-adjusting his way of living so as to meet the prevailing situation.

With reference to the *yucatecos* in general, I am very proud to say that without exceptions, the entire Peninsula is united in carrying through a drastic cut in living expenses to co-operate in lessening the burden which has fallen upon this single crop-producing territory. Everybody, men and women alike, work at home, the factory or plantation lending a helping hand during these chaotic days. Even the most destitute find a relief to their misery through public charity. The Government has not been called upon yet to set aside any money for helping the unemployed.

The above, of course, does not necessarily mean that we are satisfied with our position. We have every reason, however, meanwhile, to expect that

we will be treated with the fairness and justice to which we are entitled as a working people.

Please grant pardon for the amount of your valuable time taken with the reading of these notes, and anticipating the pleasure of your commands, allow me to remain, dear Sir,

Faithfully yours,

RAFAEL A. PEÓN.

P.S.—With apologies to our Mexican friends, we must point out that the *Cord Age* of America published the following paragraph a little time back. We make no attempt at reconciling the two views on the matter:—

"Sisal is now being exported from Mexico without export duty, according to announcement by the Mexican Government. The ruling became effective early last month, Acting Commercial Attaché Edwin Keeler at Mexico City informed the Department of Commerce by cable. Sisal has previously been subject to an export duty of 0'005 peso per kilo, payable to the Federal Government, and to an export duty of 0'012 peso per kilo collected by the State of Yucatan."

On January 19th we received a good-sized budget from Señor Rafael Peón, including books and photographs, comments on which must be delayed for our March issue, especially as the printed matter is in Spanish. But we would like to make the following extracts at once, as the information is extremely valuable at the moment when all centres are trying to pull down costs and looking around anxiously to see how the expenses of rival producers compare with their own.

"The taxes which sisal is now paying to the Federal Government," wrote Senor Peón on December 24th, "amount to \$0.017 per kilo, while the taxes paid to the State of Yucatán amount to \$0.12 per kilo. Regarding the remark in your November issue re a big sale of sisal (see p. 203), to the best of my knowledge over 300,000 bales have been sold during the past few months in the U.S.A. and Europe."

Referring to Señor Peón personally, he tells us that he studied at Beaumont College, Old Windsor, from 1902-1905, and refers us to works by John L. Stevens, written over ninety years ago on "Central America, Chiapas and Yucatán," in which prominent mention is made of the Peón family, especially the grandfather of our correspondent, Don Simon Peón. Mr. George F. King, our Vice-Consul at Mérida, writes that he has known our correspondent for a number of years as belonging to one of the oldest and best known families of Yucatán, once very wealthy (we all hope the present members will become so again). Mr. King also points out that Senor Rafael has discharged the position of managing director of the "Banco Refaccionario de Yucatán" for some time with the approval of all concerned.

The difference in the amounts said to be paid to the Government will be noted.

Review.

THE COCONUT. Third edition. By Edwin Bingham Copeland, Professor of Plant Physiology; formerly (until the outbreak of War when he left for the Mississippi Valley to help the cultivation of rice), Dean of the College of Agriculture, Los Baños, Philippine Isles. Pp. 233. Fully illustrated. Weight 26 oz. Price 20s. net. Macmillan & Co., Ltd., St. Martin's Street, London, W.C.; New York, Canada, and elsewhere.

First Notice.

Times change and we change with them; always have done, always will do. So we are told and told truthfully, but alas, who can claim that Nature has changed or can change if she would wish. It is only "we," i.e., man who changes, restless in movements, tireless in ideas and ideals, pitiless in his mania to sweep away everything attractive or otherwise, to alter what *is*, for what he, in his conceit, is always telling you, *should be*. So the country gave way to the suburb, the factory, and eventually the slum, and horses took the place of travelling on foot until the iron way came, soon to be superseded by the rubber-wheeled vehicles and aircraft, both killing men and women unrelentingly, not because they wish to die but because they live in a progressive age when nothing is good except that which has yet to come.

If, during the past five hundred years, the civilized world had been handled and ruled and, above all, improved by women only, ask yourselves honestly, should we have had these murderous maniacs of to-day, or even the more steady-going and comfort-giving improvements in the home or out in the fields? One has to own that the answer must be in the negative. We have had one Madame Curie, but she was a researcher rather than an inventor. One feels therefore that all modern "conveniences," for safety or speed, have come from man's restless brain, and what is more, that this restlessness shows every sign rather of becoming more marked than of settling down.

All this refers to man, not to Nature, which we always speak of as a woman therefore less anxious to change. She has given us many gifts on land, in the water and from the air, but not to use as you would armies to pit one against the other until gladiator-like one slips and falls, and man, with his Yes-Yes echo, woman, cheers the victor, and it's a case of "thumbs down." This means that one is pushed out of the way to make room for what is new, merely, as a rule, because he seems to be cheaper or more helpful to man to make money.

This policy of constant change—almost a religion to be worshipped—has particularly seized,

on the vegetable oil kingdom, whether to mankind's benefit, taking producer and consumer together, we leave to the world itself to say. But whatever the result or benefit, the war between the various oils has been carried on most unrelentlessly. Each oil had its use; some claim it was true that you had only to pass a wick through some aquatic bird and use that as a lamp, whilst animals gave their fats, the sea certain oils, and above all the land produced vast quantities from seeds, nuts, and, in the tropics, from palms. But then there was no rivalry, no cut-throat war, even when soaps came into general use. All went well until the beginning of this century, when two terrors awoke and gave us first edible coconut oil on the one hand and margarine on the other. From that day, however much as the consumers may have benefited, the coconut industry in the tropics has suffered, and is suffering still. At first it seemed as if the newcomer would assure the future of coconuts for all time and make them the lion among the vegetable kingdom.

Instead of this, exactly the opposite seems to have happened. All the other oils arose and claimed the position of premier place, and if no single one has secured that position they seemed to have made King Coconut take a very back seat. Were it not that India and other ghee-consuming countries had called to coconuts for help in supplying them with artificial ghee, one rather wonders what would have happened to the industry as an industry and not merely as a means of supplying the native grower with his everyday requirements.

What can we do meanwhile to put this Lion back on his pedestal again and rout his enemies, whale oil and fish oil especially, with soya beans and groundnuts kept well under observation as well? Professor Copeland, on p. 30, speaks of "one of the largest coconut forests in the world, near Mount Banahao." Whose property is this? Is it a capitalist venture, or communal, or does it belong to the Government? Would it pay these collectors of 10,000,000 trees to run campaigns to protect and advance their own interests? How do our groves in India and Ceylon compare with those in the Philippines?

The appearance of the third edition of Dr. Copeland's masterly study on the coconut tends to put new hope into one's mind, first of all because it is a third edition, which means to say that two editions have already been called for and exhausted, and secondly, because it is by Dr. Copeland, who has studied the subject so closely for years, and who one feels knows what is wanted in such a book, and where and how those wants can be satisfied. "The Coconut" goes far to satisfy these needs; true, it does not tell us how to rid the world of all the modern competitors of the coconut, but it does strive to show the lines by which the war may be carried on into the enemies' camps, and that surely is some help.

"Twenty-seven years ago," starts the Foreword to the third edition, "I began the intensive study of the water relations of the coconut palm . . . from my colleagues, my Filipino students, and later from their students, every phase of coconut science has been covered. The coconut industry of the Philippines, from a mere bad example, has become the greatest and most profitable in the world. It has replaced muddy trails with paved roads and railways. It has built an oil industry in Manila and Cebu, and it pays the highest steadily sustained wages ever known in tropical agriculture."

This is cheering news, but how has it been done? Send your sovereign for a copy of the book and study the process. Have the English done wrong in refusing to sanction a coconut boom based on thousands of small "lots" or gardens already planted and maintaining a family, because rubber did so well after establishing their own estates? If the Filipinos have been receiving such splendid wages, who has been paying them, estate owners, traders, or who? If these folks can do so much good to the community, have we, with several leading centres under our rule, done equally well? If not, let us start from to-day and reform. How to do so? This book will help you "some," but we must be willing to help ourselves also. How that can be done we will discuss in another issue.

Those of us who are over fifty, as well as many others, will clearly remember the long association that (the now late) Arthur Collins had with Drury Lane, especially since 1897 when he became managing director. The writer remembers 'Gus Harris on the stage in a play—name forgotten—which took us up the Nile and 'Gus was dying in the desert for want of water. Of course some wonderful child gave it to him and was about to be well lashed—it *was* a horrible whip—by the Arab, when a refreshed and recovered 'Gus stood up to him and help came, so all was well. What year was that? It may even have been forty years ago (but probably over fifty) or about the time when Arthur Collins first went to Drury Lane under Harris as a scene painting apprentice to Henry Emden. 'Gus died in 1896, and after some months Arthur Collins took his place and made Drury Lane, as this generation has come to know it, a truly wonderful place of amusement, with nowhere quite like it in the world. Now its genius is no more. He retired in 1924, with a well-earned pension £2,000 a year, which he has thus lived to enjoy for over seven years. When in harness, it is said that his salary reached £7,000 a year. Whatever the sum was, all knew that it was well and fully earned.

ROMANCE.

Lands of Gold(en Opportunities).

RALEIGH'S El Dorado is more—far more—alive to-day than ever it was when that adventurer and the Spanish *conquistadores* before him, dreamed mad dreams that those areas which we now know as Latin America could turn out gold merely for the asking so far as the conquerors were concerned. By all but exterminating the Indians the Spaniards certainly did flood the world with the precious metal to an extent that was never dreamed of before, not even in the days of Solomon or the Romans, not even of the rulers of Egypt whose graves have recently been opened and their wealth laid bare to the world.

All this time, however, the gold was only for a comparative few. To-day there is more wealth than ever tucked away in this country of the Latins, south of the United States of America, but it is not to be obtained by slave-driving or with pick and shovel. The wealth has to be dug out, but from above ground not beneath it, and if, at the moment, the trade of the world including Latin America is hung up, truly it is not dead, but remaining in its matrix like a restricted rubber crop in the trees, and is waiting to give bigger yields than ever once the "Open Sesame" is sounded and the trade of the world goes ahead again.

Meanwhile do not let us waste time and energy in bewailing our lot. Those who can afford to make the voyage would be well advised to invest the small sum of 2s. 6d. in a copy of the 1932 edition of "The South American Handbook,"* which tells us in fullest detail where to go to locate the latent wealth and who to trade with when the world does "get a move on it" once more. At the same time make a pleasure of the trip and take a full measure of the romance of this wonderful country of much wealth. Here let our readers remember, if you absolutely cannot afford the voyage, you can afford to buy the Handbook and study all that it has to tell us. Let us sample the contents at random, although alas! in a way that cannot do justice to the book and much less so to the country itself.

You start in Mexico, say at Guadalupe Hidalgo, just outside Mexico City, with its church, visited by the Indians, where the silver railing is estimated to weigh 27 tons. Further on is La Vega leading to Embarcadero where canoes can be taken to see the floating gardens at Santa Anita and Ixtacalco. At the other end of the journey, you have Ushuaia, capital of Tierra del Fuego, with its snow-clad peak, the waterfalls and dense woods and valleys. In South Chile also, you find the Araucanian Indians, some 100,000 of them, *Mapuchés* =

people of the Land, they call themselves. They play a game like hockey with a ball and bent sticks and call it "*La Chueca*."

Lima in Peru is "great," with Cordoba in the Argentine it is reckoned to be among the oldest of those very old Spanish cities. Lima is Pizarro's "most glorious" city, and there in its cathedral, founded in 1535, his remains rest.

At Uyuni in Bolivia, some 12,000 feet up, you meet droves of llamas and near by are the celebrated Huanchaca silver mines. Hop across to Rio de Janeiro and ask local know-alls to tell you the meaning and story of Botafogo beach; it must be a gruesome tale.

In Sao Paulo, remember the orchid houses in the Parque de Estado, they are very beautiful; the flower market outside the Municipal Theatre must be the same, all say the displays are truly magnificent.

Manaos, which makes you think of rubber, is a great place for curios, most interesting to "grub" among and take stock of, if you do not ask too many questions as to where some really come from. Here also is the Bosque, i.e., a piece of original jungle forest, with original animal and insect inhabitants just to give the visitors a taste of what they can enjoy further up the river. On the Pacific side down Chile way, if, after your jungle experience you want to enjoy life at its best and brightest in atmosphere, social surroundings, attractive clothes and people, tarry awhile at Viña del Mar, where life is always worth while at that seaside resort when the season is on. Then move up north to Cartagena in Colombia, founded by Pedro de Heredia in 1533, and think of Drake, of pirates and buccaneers galore.

Santo Domingo, or Hispaniola, now known as the Dominican Republic in mid-ocean, was the home of the original "beauties," as it was from there Mansfeld and Morgan, if not others, recruited their crews after noting the butchers and their knives in the centre of the island where they carried on an illicit trade in supplying the vessels with meat dried on the *boucans*—hence *boucaniers*—and obtained from the cattle that ran wild since the days of Columbus. In Colombia also is Santa Marta, connected with Simon Bolivar; it has a history of some 400 years behind it, having been founded by Rodrigo de Bastidas in 1525, just twenty-four years after that same adventurer discovered Panama. Up now to Central America, note Puerto Bello where Drake died and was buried at sea. It is near Colon in Panama which Balboa crossed in 1513 and discovered the Pacific Ocean, six years before he was beheaded in 1519. Up north once more to Mexico, you will find an amazing cypress tree at Santa Maria del Tule in Oaxaca, said to be 160 ft. in circumference, whilst

* "The South American Handbook," over 600 pages of small type, price 2s. 6d. net. Trade and Travel Publications, 14, Leadenhall Street, London, E.C.1.

it was at Querétaro, 167 miles north of Mexico City, that Franz Joseph's brother, the Emperor Maximilian, was shot in 1867. All these events, grave or gay, merry or sad, but always interesting, you will meet between Mexico and Tierra del Fuego, and many thousands more if you study the "South American Handbook" and learn all about them.

Let us remember what the Prince of Wales told us when speaking at the dinner of the Argentine Chamber of Commerce in London on January 19th. After telling us how the common advantage of the commercial relations between Argentina and ourselves may be furthered, H.R.H. went on to say, "While I like to think that my last visit helped a little towards the success of the British Exhibition, which was not followed by very good times, and helped the resultant interchange of trade, I hope that a new chapter will begin from that last visit of mine in the cultural relationship between the two countries which is more subtle than the commercial one."

"I mentioned cultural relationships in my speech at the Exhibition, and as a result the Foreign Office sent out a mission to the Argentine. Schemes have been drawn up for the interchange of students and lecturers between Argentina and Great Britain, and for a wider circulation of English books in the Argentine." All this is to the good; meanwhile be wise in time and study what this handbook has to tell you about Argentina. It has much to say and it is well said.

The prospects of the West Indian sugar crop for 1932, we are told, are very much more encouraging throughout the islands than was the case in 1931. The most outstanding development in recent years of methods of soil tillage in preparation for the sugar crop in these islands is due to the enterprise shown by the Antigua Sugar Factory, Limited, which a few months ago purchased a Gyrotiller. This implement (according to *Tropical Agriculture*, the organ of the Imperial College of Agriculture, in Trinidad) manufactured by Messrs. John Fowler & Co., is capable of stirring the soil to a considerable depth and, in one operation, to plough, cultivate, harrow and ridge. It is propelled by a 150 h.p. Diesel engine and is mounted on caterpillar tracts. It does its work in a dry soil, and judging from the excellent tilth obtained on the several hundred acres on which it was used in Antigua, increased crops may confidently be expected. It is understood that the Gyrotiller is to be sent out to Trinidad, where a group of sugar estates have combined to give it a trial. This is good news, and we wish the venture the best of luck.

Soon after this issue is published many of our readers will be hurrying first to the White City

and Olympia in London and then to Castle Bromwich, Birmingham (or vice versa) to inspect the exhibits at this year's British Industries Fair. In London the Fair will be opened each day from February 22nd to March 3rd at Olympia, and to March 5th at the White City, except Sunday, February 28th. At Birmingham the Fair will be opened from February 22nd to March 4th. The Empire Marketing Board will be found in Hall A.

This will be the eighteenth Fair and the largest of the lot. The floor space will amount to about 30 acres and the stand frontage extend to some sixteen miles. There will be about 2,200 exhibitors. Tea and also coffee will be exhibited by H.M. East African Dependencies, by India and Malaya. Cocoa by Messrs. Cadbury and Messrs. Fry, whilst Mauritius and East Africa will show cane sugar and Canada maple sugar.

Peary reached the North Pole by sea, land and ice. That was in 1909. Seventeen years later the North Pole was crossed by the air route. Byrd, in May, 1926, flew over it and back by aeroplane. In the same month, Amundsen crossed the pole by air, flying from Spitzbergen to Alaska in the airship *Norge*. In 1928, Wilkins, in an aeroplane, flew from Alaska to Spitzbergen, crossing the Pole *en route*.

On each of these occasions the pioneers of Arctic exploration relied upon "Tabloid" equipments for their medical supplies. Now Sir Hubert Wilkins is making his dash to the North Pole by submarine, which carries a very complete first-aid and medical equipment. If he succeeds, as every one must wish, "Tabloid" compressed medicines will not only have been the first to reach the Pole by ice, but also by air and under the sea.

Everybody recognizes that photography to-day is a far simpler thing than it was, say, in our boyhood days. Few, however, really appreciate how extremely easy it is.

The fact is forced upon us by the receipt of a booklet, in the twelve small pages of which are summarized the essentials of modern photography. It will be a revelation to all who consider photography difficult and to those who, afraid of trouble, are content to leave its most fascinating stages to someone else. Increased pleasure at decreased cost will result from studying this booklet and following the methods advocated.

Probably no one but Messrs. Burroughs Wellcome and Co. could condense so much into those twelve pages, but then they are adepts in the art of compression in literary works as with the products they turn out, i.e., the "Tabloid" products for which they are famous. The booklet is fascinatingly artistic, as everything photographic deserves to be, but it is also intensely practical. A copy can be obtained gratis from the publishers, address G.P.O., Box No. 213A, London.

Bananas as a Crop for the Gold Coast.

By A. J. Burns, B.Sc. (Agric.), N.D.A.

ATTEMPTS are being made just now in the Gold Coast Colony to introduce new crops for the export trade and so strengthen the colony's economic position by reducing its dependence on the price of cacao. Everyone knows that the Gold Coast is the world's chief source of this article (see p. 39 for exports during the last three years), which forms such a large proportion of the Colony's total export that its wealth or poverty is connected to a dangerous extent with the values received. It is also the object of the local Agricultural Department to increase the cultivation by the natives of food crops for their own use since it has become so obvious that if the population of the Colony is to be increased to a useful extent, larger supplies of foodstuffs must be available.

For the first purpose, to open up new export industries, no crop appears to be more suitable than the banana, which would also serve to some extent as a native food crop. There can be no doubt that the banana could be successfully cultivated on the Gold Coast as a plantation crop, especially in the southern part of the colony, since it is already grown by the natives there. According to Rung the northern limit of banana cultivation in that part of Africa passes through the Northern Territories and includes the whole of Ashanti, whilst the Gold Coast proper is within the banana belt.

It will be of interest to mention here that, although all plantations in the Cameroons are hard-hit by the present crisis, it has been found that those which depend chiefly on banana-growing have, up till now, come through best. Many are therefore centring their attention more on bananas, and a German shipping company has started a service of fruit-carrying vessels with cold storage accommodation.

The banana requires an average temperature throughout the year of at least 68° F., and this condition is more than fulfilled on the Gold Coast where the yearly average is approximately 80° F. If sufficient atmospheric and soil moisture is available it cannot be too warm for the banana, but temperatures of less than about 58° F. should not occur, although the "Cavendish" variety (the Canary banana) can withstand temperatures as low as 50° F.

The rainfall should be at least over 60 inches per annum; otherwise irrigation is necessary as in the Canaries. Conditions should be such that the humidity is always high and long drought periods should not occur. Such conditions are fulfilled in Jamaica where the climate is ideal for bananas. There, two so-called rainy seasons occur in the year, although in practice the rainfall may be said to distribute itself fairly equally over the whole year. A similar distribution of rainfall is met with in the southern portion of the Gold Coast

Territory. It seems likely that, although the rainfall is satisfactory in that respect, the total rainfall will not be everywhere sufficient for estate cultivation of bananas. There are, however, areas, notably a strip of the Gold Coast proper, adjoining the French Ivory Coast, and much of Ashanti (especially its south-west corner) where the rainfall will undoubtedly be sufficient. Other hopeful spots would be the district round Kumasi, various localities on the Kumasi-Sekondi Railway and possibly round the rail-head of the Accra line.

The red loams and laterites, which are practically the only soil types occurring in the Colony, will almost everywhere lend themselves to banana growing where the climate is suitable. It is unfortunate that the highly productive red loam automatically gives rise to the only moderately productive laterite by more intensive leaching in most of the districts where the rainfall is definitely high enough for bananas. Nevertheless the soil should not raise any great barrier. The best soil is a fairly heavy loam which must be 3 to 4 ft. deep to allow of the free growth of the long tap-root. Soils with gravel beds, rock or hard-pans near the surface will never do well. According to experience in Jamaica, soils should be rich in lime and organic matter.

The extent to which intensive banana cultivation can be profitably carried on is well demonstrated in the Canary Islands where the land, in addition to being terraced and irrigated, receives very heavy applications of artificial fertilizers. The very rapid growth, combined with the comparatively small root system and high ash content of the banana, suggest that it requires large quantities of easily soluble plant food. A good 50 per cent. of this ash consists of potash alone. The usual practice in the Canaries is to give a mixture of 35 parts of sulphate of ammonia, 40 parts of super-phosphate and 25 parts of sulphate of potash which is applied at the rate of 6 tons per hectare (almost 2½ tons per acre). This amount is divided into three applications throughout the year—one in March, one in June and one in September. It contains 7 per cent. nitrogen, 7 per cent. phosphoric acid, and 25 per cent. potash and is spread by hand (sometimes with the addition of small quantities of iron sulphate) within a radius of a yard round each stem and later dug in.

The following plantation records from the Canaries (quoted by Ruschmann) will be interesting as a demonstration of the influence which fertilizers exercise on the yield. The estate which consisted of about 370 acres did not lie in one block but was divided into fifty-two different parts spread over a stretch of more than six miles and with a difference of 1,300 feet in altitude between the highest and lowest. The record of the manuring and yield over

a period of four years from such a holding has therefore some guarantee that the results are not purely accidental but are the average resulting from quite a varied set of conditions.

For many years all divisions of the estate had received the mixture given under "First Year" in the following table, the fertilizers used being sulphate of ammonia, superphosphate, sulphate of potash and farmyard manure. The yields were, however, not satisfactory and on being consulted Ruschmann advised the modifications indicated under the headings "Second, Third and Fourth Year." That is to say, he increased the proportions of nitrogen and potash, the total quantities of fertilizers and the application of farmyard manure, while the proportion of superphosphate was decreased.

TABLE SHOWING DRESSINGS AND RESULTS OBTAINED.

DRESSING PER ACRE	PURE PLANT FOOD IN LB. PER ACRE			YIELD	
	N	P ₂ O ₅	K ₂ O	Bunches per acre	Hands per bunch average
1st year:—					
3,062 lb. mixed fertilizer (6-7-12.5)	184	214	383	462	8.8
6.4 tons farmyard manure					
2nd year (Spring):—					
1,531 lb. mixed fertilizer (6.6-5.1-13.7)	101	89	210	560	9.6
(Autumn):—					
1,531 lb. mixed fertilizer (7.2-5.3-13.7)	110	81	210		
8 tons farmyard manure					
3rd year (Spring):—					
1,837 lb. mixed fertilizer (7.2-5.3-13.7)	132		252	570*	9.8
(Autumn):—					
1,837 lb. mixed fertilizer (7.4-5.1-15.5)	136	94	285		
* Average weight per bunch, 38.5 lb.					
4th year (Spring):—					
2,226 lb. mixed fertilizer (7.4-5.1-15.5)	165	114	345	†	
(Autumn):—					
2,226 lb. mixed fertilizer (7.4-5.1-15.5)	165	114	345		
11 tons farmyard manure					
† Average weight per bunch, 50 lb.					

It will be seen that the results were very satisfactory, not only the number of bunches but the number of hands per bunch and the weights of the bunches increased steadily during the period of the record. Unfortunately the weights of the individual bunches were not determined in the first two years and results are only available for ten months of the fourth year. However, in those ten months, there was an increase of forty-five bunches per acre on the yields during the same period in the third year.

It is not to be expected that such intensive treatment would immediately pay for itself under Gold Coast conditions but it is worth remembering that such a system of cultivation, along with green manuring and liming will prolong the life of a

plantation almost indefinitely and make it unnecessary to break in and plant new land every three or four years.

References.—[1] W. RUSCHMANN, "Banane," Wohltmann-Bücher, vol. viii. [2] H. L. SHANTZ and C. C. MARBUT, "The Vegetation and Soils of Africa," American Geographical Society, Research Series No. 13. [3] Dr. RICHARD RUNG, "Die Bananenkultur." [4] GUSTAV LEFEVRE, *Bull. de l'Agence Générale des Colonies*, 1928, No. 230.

A customer with a trade turnover of £40,000 to £50,000 a year, is anxious to hear of trustworthy concerns willing to trade to mutual advantage. We are referring to the Turk's Island Dependencies attached to Jamaica, where influential men have formed themselves into a Trade Development Board to encourage the others to help develop trade with this Country and elsewhere. The Hon. W. A. Darrell is President of the Board and Mr. D. A. Darrell the Secretary. Salt, sponges and sisal are the chief exports; what the islanders need in return can be ascertained by writing to the Secretary, Turk's Island Trade Development Board, Grand Turk, via Jamaica, B.W.I.

Marine engineer, good all-round practical mechanic, metal and wood-work if needed, is open to an engagement. Fluent French. Around London preferred.

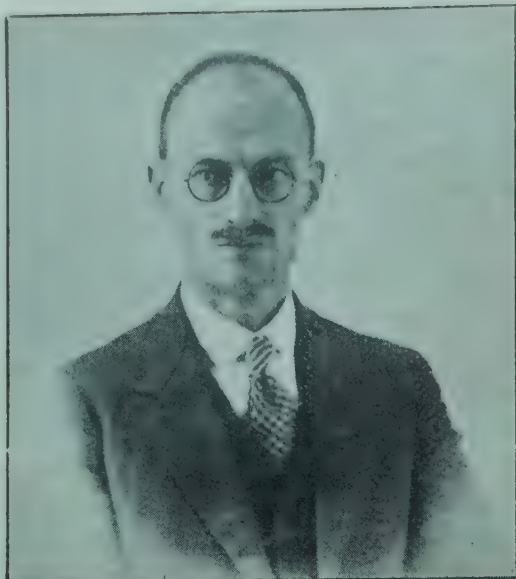
Those of our readers who are thinking of publishing a book would be well advised to get into touch with our Publishing Department at once, if the book is to appear in the autumn.

(Continued from p. 30).

it lives, on the temperature and amount of oxygen; whilst too much CO₂ causes rotting and disease.

Regarding stored sugar, although not alive it contains a certain amount of hygroscopic moisture, so that if the atmosphere is too dry its moisture content is extracted by the air and the sugar hardens, whilst if the air is too humid the sugar dissolves. Fortunately it is now possible to obtain complete plants which will create and maintain almost any desired atmospheric conditions and which have facilities for altering rapidly and with ease any of the various atmospheric constituents.

It remains, however, for the tropical produce chemists to decide how much heat, moisture and carbon dioxide are given off per hour by a definite weight of any particular live fruit in the atmospheric conditions most suitable for its storage and what those atmospheric conditions should be in each case. Much research work has already been carried out and considerable useful data accumulated, but there still remains a vast amount to be done and it is to be hoped that much money will be saved by avoiding losses alone, when the work is nearer completion.



"Tropical Life" Friend.

No. 320.

Mr. GILBERT L. COPPING.

A Well-known Authority on Tropical Drying and Ventilation.

WHEN discussing the most suitable method for drying this or that crop in the tropics, especially on a large scale, or for transporting fruit, meat, and other perishable articles over long distances in even temperatures, we, in our ignorance, thought only of fans, larger or smaller in size, as being able to do the desired work. The reasons why they were able to do the work did not penetrate our brain until one day, having been pulled up short in a discussion over the best temperature for bananas, we betook ourselves to "Our Friend's" sanctum at the head office of the Blackman Export Co., Ltd., in Euston Road, from which we emerged one hour later with, it is true, the correct answer on paper, but with our poor brain in a perfect whirl over what we had been told for the first time in connection with the whys and the wherefores of the bent iron frames known as fans, being able to do the work required of them in a manner as reliable as it is certain.

True it was not our first experience in the matter, for, it may be remembered, when publishing the two editions of our own book on "Coconuts—the Consols of the East," it was Mr. Copping who coached us up in the satisfactory explanations of our crude ideas of how to desiccate copra and other products on a huge scale as described in that book. We knew what we wanted, and thanks to "Our Friend," we were able to show how others who approved of our plans could attain their objects.

Now we are deep in discussions as to optimum temperatures for storing fruit and perishable eatables in the tropics until they can be shipped and then on board and even at the distributing centres after shipment. One of our correspondents urged that much has yet to be done in connection with the better ventilation of green coffee in the

holds of the vessels when shipped in large quantities, whilst at the back of our minds, in these days of fewer but much larger producers of tropical crops, we still hold that drying houses with several wired floors, and worked by gravitation from the top floor, still offers the best solution for drying tropical crops on a large scale without any danger of scorching them. If necessary, the floors, either as a whole or in sections, can be made to oscillate or kept continuously shaking, so that with crops like cacao or copra, coffee as well, the berries, &c., will be ever on the (slight) move so that all will get evenly dried, i.e., de-hydrated in the end.

Those were and still are our crude ideas, but when we approached the technical, scientific, and even, one can well claim, the chemical side of the matter, our mind took a very back seat as Mr. Copping went on to explain how our wishes could be fulfilled. It was all however a little beyond us, although we were assured it was all quite easy of attainment. Humidity and temperatures inside and outside the buildings we understood fairly well, but when we came to the matter of gases, especially carbon dioxide—CO₂, we believe, is the symbol—and nitrogen, then we let "Our Friend" do the talking and we only listened and made notes.

We were discussing improved ideas in connection with the withering of tea, then went on to the possibility of the Gold Coast Colony being able to develop an export trade in bananas and citrus fruits. This is what brought the avalanche of scientific terms on the top of us. These finally were dissolved (roughly) into the following explanations:—

Tea must be withered and fermented, fruit and similar produce must be stored, in an atmosphere which is at the right temperature and relative humidity and contains the correct proportions of oxygen and carbon dioxide.

These four factors should be under control and facilities available for their variation, to obtain or maintain their values which are found by the chemists to be the most advantageous for the particular purpose.

For instance, when withering tea, if the atmosphere is too hot and dry, the leaf is dried too rapidly and chemical wither does not take place, but if the air is too cool and too humid, the water contents of the leaf are not removed whilst bacterial deterioration is set up.

In conditioning and regulating the atmosphere in fruit stores it must be borne in mind that the fruit is alive and needs a proper atmosphere like a human being does. It should be regarded as at rest and so the atmosphere should be restful, not invigorating, as that makes it live fast, nor must it be of a suffocating nature so that the produce gets diseased, nor promotive of the propagation of bacteria. It is of course well known that the rate at which fruit dries depends upon the humidity and temperature of the atmosphere; the rate at which

(Concluded on p. 29).

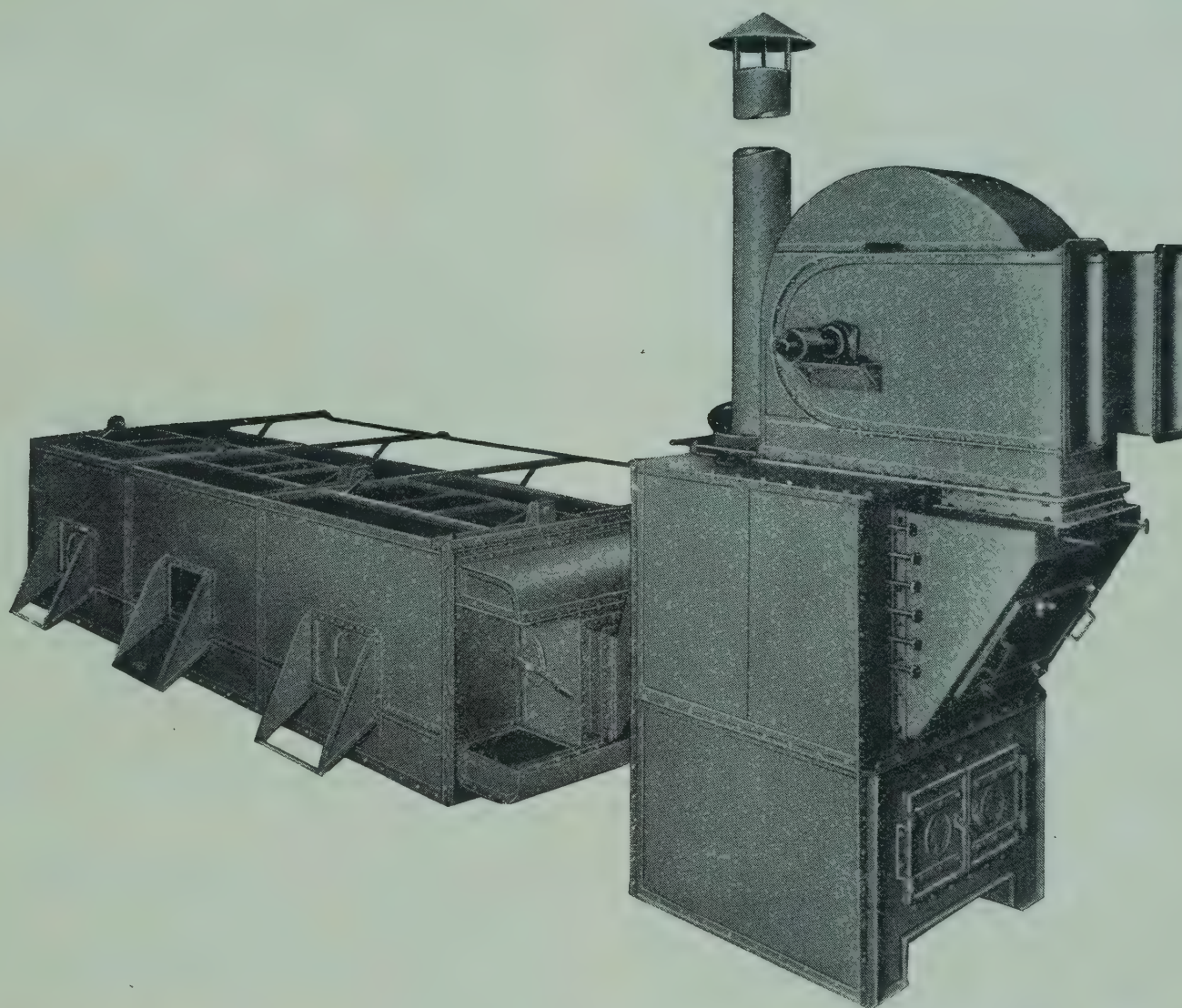
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 you must mention “Tropical Life” when writing or seeing them.

BARCLAYS (D.C.O.) BANK.

Sudden death of the Deputy Chairman.

BY A SHAREHOLDER.

BOTH father and son—Barclays Bank, Ltd., and Barclays (D.C.O.) Bank—deplored the loss of their Deputy Chairman, Sir Herbert Hambling, Bt., who died suddenly—as he was sitting down to breakfast—on January 19th, just two days before the meeting. Everyone who knew Sir Herbert, or who had listened to him speak or read his remarks in print, must sympathize with Mr. Goodenough, the Chairman, and his two Courts of Directors over their loss. Sir Herbert Hambling could say so much in such few words, but those few words were enough to carry confidence and conviction to his hearers. In these days when the bulk of us lack decision and know not which way or where to turn, such a man, perhaps partly on account of his tall, strongly-knit frame, gave you assurance and a lead which, if you were wise, you followed. You felt, as he rapped out his words, that behind them were careful consideration and long experience, and so went on your way satisfied. Talking of long experience, surely everyone must have been astonished at his age, 74; I would have knocked at least ten years off that number.

* * *

As the Report shows, the accounts and statistics are for the year ending September 30th, 1931, so that most of the figures quoted will be rather ancient history to our readers, although the following are worth noting. In the West Indies, the exports of sugar from Trinidad in 1930 amounted to 69,138 tons, but during 1931 their production reached 98,000 tons which was a record for that island. In 1930, the production (not export) is put down as being 80,000 tons against 90,000 in 1929, their previous record year.

Operations, we are told, under the Dead Sea Concession are proceeding, and bromine products are already being marketed in England. The potash plant has been completed, and an output at the rate of 10,000 tons per annum has already been attained. [This exploitation of the products of the Dead Sea was at one time a great hobby of TROPICAL LIFE, but we had to turn to other matters and leave the Dead Sea to others to write about.—ED., TROPICAL LIFE.]

In Palestine the prospects for the orange crop are good, and it is expected that a record total of 3,500,000 cases will be reached. It is doubtful, however, in view of prevailing conditions, if prices will prove to be as satisfactory as during last season. [All the same, those who wish to establish a citrus fruit production industry in the Gold Coast should study the building up of the industry in Palestine.—ED., TROPICAL LIFE.]

The market for Kenya coffee is considered to be expanding and it is understood that a large percentage of the foreign purchases emanates from the

U.S.A. In Nyasaland, the cultivation of tea is extensive and the quality is steadily improving.

In South Africa the total production of sugar for the year 1930-31 was 393,000 short tons, an increase of 95,000 short tons as compared with the previous year. The original estimate of production for the year 1931-32 was 365,000 short tons, but owing to the September (1930) drought, which affected especially certain parts of the North Coast sugar belt, the estimate was reduced to 329,400 short tons. In consequence, the amount available for export may be reduced to 165,000 short tons, as compared with 180,000 short tons for 1930-31.

Towards the end of this speech, Mr. Goodenough said:—

"You are, of course, fully aware of the difficult conditions by which business has been affected in almost every country in the world during the past year, arising chiefly from the continued fall in commodity prices. These difficulties have been experienced in all the territories in which the Bank is established.

"The Board desire to record their very cordial recognition of the services rendered to the Bank by its Local Boards, which have resulted in the adequate protection of the Bank's resources with the continuance of reasonable credit facilities. They also wish to express their appreciation of the loyal support of the Staff throughout the Bank during a period of great difficulty, which has called for unremitting attention."

The Chairman might well have added that since the world seems to look more and more to the banks for a lead and less and less to their rulers, the additional responsibility and the work that this must entail on the Directors and Staffs everywhere, from managers to messengers, must be very considerable; all the more reason to thank them, therefore, both for the help we have received from them and for that which we feel sure we are about to receive.

"Reparations," the January *Review* of the Westminster Bank points out, "formally translated two and a half years ago from the dangerous sphere of politics into what was regarded as the far safer one of economics, have returned to become the leading issue of an hour in which politics and economics are conspicuously fused and inseparable. The Western World, having first insisted on the payments of huge sums by vanquished to victors, and by some victors to others and, having subsequently refused to accept payment in the only currency in which enormous amounts can be paid—in merchandise—has reached the position of deadlock which, sooner or later, was inevitable.

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Tropical Life.

FEBRUARY, 1932.

Sugar in 1931.

The Outlook at the Start of 1932.

"CUBA," wrote Dr. Prinsen Geerligs in "Facts about Sugar" for January, "with a technical capacity for producing 7,000,000 tons of sugar and possessing cane equivalent to 5,000,000 tons, reaped as her 1931 campaign, only a little over 3,000,000 tons and left the equivalent of 2,000,000 tons standing in the fields."

Meanwhile, as the writer in the *London Confectionary Journal* on the International Sugar Markets points out, Puerto Rico has increased her crop from under 700,000 tons to 835,000, and the United States shows no signs of restricting her output by a single ton in spite of the fact that she (America) has set the sugar world by the ears through not taking her full quota of sugar, 2,577,000 tons, from Cuba and so throwing out the balance of distribution everywhere. It seems that another 645,000 tons should have gone to the U.S.A. Had America halved her beet output as Cuba has done her crop (with the world clamouring for her (Cuba) to make further sacrifices), what a difference it would have made both on points of confidence and trade. In nine months only, Java is behind in her exports to the tune of 560,000 tons and Europe is returned as having cut down her crops by 2,843,000 tons. Had America lifted her full quota, arranged by her own experts, that shortage in Java's trade could have been passed off, whilst, of course, Cuba with her segregated sugar added to instead of decreased, is in a worse pickle than before the Chadbourne Scheme came into being. No wonder the cane-growers in the island are against the scheme, since it causes them to suffer whilst those who arranged it in the United States are putting out all the sugar they can and Puerto Rico, a Spanish centre like Cuba, has been allowed to increase her crop.

If the United States' consumption of sugar did fall away in 1931, it was only to the extent of 217,000 tons, a quantity that could easily have been knocked off her own and Puerto Rico's production, and it was something more than that which caused so big a deficit in the drawings from Cuba, especially as, according to Czarnikow, the drop was 124,000 tons only, *i.e.* 5,475,000 tons, refined value, against 5,599,377 tons in 1930. We are told imports from Hawaii were increased by about 40,000 tons on the year. What other centres sent more sugar to Uncle Sam to cause him to take so much less from Cuba? If it is claimed the other 400,000 tons were over-pur-

chased in 1929 and 1930, then why ask for such a generous quota in 1931, and cause the world to think that America would stick to her own bargain when she has done nothing of the sort?

"The uncertainties of the sugar situation at the moment militate against any whole-hearted restoration of confidence," write Messrs. Czar-nikow. Until confidence is once more paramount the sugar markets will grow worse instead of better, but how can confidence—of the right sort—be restored when Cuba and the cane producers generally are treated as they were treated last year by the U.S.A. and Puerto Rico, now 100 per cent. American also?

It was good to hear a shareholder discuss the above at the annual meeting of Barclays (D.C.O.) Bank, for in these days the speeches, reports and actions of the banks and bankers alone seem to count. Far better air such a grievance, therefore (thinking of our sugar-producing colonies and dependencies thrown out of gear by America's default) before the leading bankers than in the House of Commons. Politicians nowadays are so busy talking to and at each other (No! we did not say slanging each other) that we have given up expecting them to look after us, with the exception, one feels, of Mr. Amery. If, perchance, we do catch their ear they make many promises and do nothing, whilst the bankers promise nothing and do a great deal. At least that is what we have come to think. The Report of the Bank, just received, includes a very good reproduction of the remarks made. We hope that many of our readers will study them and not let the matter rest.

The growth of the national and international effort for the total abolition of slavery in all its forms, coupled with the forthcoming Centenary celebrations of British abolition, has necessitated some changes in the organization of the Anti-Slavery and Aborigines Protection Society. The work will, in future, be conducted under the joint Presidency of:—

The Right Hon. The Earl of Lytton, G.C.S.I., G.C.I.E.

The Right Hon. Lord Meston of Agra, K.C.S.I., and

The Right Hon. Lord Noel-Buxton.

Mr. Charles Roberts becomes Chairman of the the General Committee in succession to the late Lord Henry Cavendish Bentinck, and Mr. Charles Roden Buxton, formerly M.P. for Elland, is Vice-Chairman, the Treasurers being Sir T. Fowell Buxton, Bart., and Mr. Alfred Brooks, J.P., whilst Mr. Travers Buxton and Mr. John H. Harris are respectively Hon. Secretary and Parliamentary Secretary.

Sir John Simon has agreed to receive a private deputation from the Society at an early date. The members of this deputation will be introduced by the Right Hon. the Earl of Lytton.

His Highness the Emperor of Ethiopia has invited the Society to send a representative to his Court at Addis Ababa, the capital of Abyssinia, to discuss certain problems arising from the decision of the Emperor to abolish slavery throughout his dominions. The Right Hon. Lord Noel-Buxton, accompanied by Lord Polwarth and the Hon. Grizel Scott, has agreed to undertake this important mission.

Referring to the paragraph headed "Good News for Housewives" in last month's issue, where we spoke of a report that a thousand butcher shops were to supply exclusively New South Wales meat in the U.K., the secretary of the N.S.W. Government in London, whilst not contradicting the report, wrote as follows:—

"Having reference to the paragraph published in the January issue of your publication regarding a scheme for the distribution of N.S.W. meat through a chain of retail establishments in this country, I am directed by the Agent-General to inform you that this department has not received any official information in connection therewith." (Signed) J. W. Ferguson, Secretary.

All the same, we hope that something of the sort will be done, and we shall always be pleased to do our best to help in any such movement, whether in connection with meat, cocoa or other products.

"Meat is cheap," claims the headline of a leading London daily quoting the Superintendent of the London (Smithfield) Central Markets. Wholesale prices, we are assured are, or were, in mid-January lower than 1913 in some cases. One wonders if any housewife or buyer retail will notice any difference in the price they are asked to pay. We should say not.

On January 16th, Press reports commented on the complete year's figures of the U.S. trade returns for 1931. Exports are down by \$1,418,998,000 (or £283,799,600 at par) and imports \$907,801,000 (or £194,160,200 at par) lower; the actual figures seem to work out as under ('000 dollars):—

JAN.-DEC.	1931	1930
Total exports	2,424,183	3,843,181
„ imports	2,090,107	3,060,908

Trade balance in favour of the U.S.A. \$334,076,000, or £29,065,000

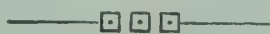
The commercial balance of the trade of France last year shows approximately a deficit of £100,000,000 (at par), according to the Correspondent of the *Morning Post*. The figures in sterling at par work out as follows: Imports £350,000,000, against exports £253,000,000 or, as stated, an adverse trade balance of £100,000,000.

Bananas for the Gold Coast.

MORE than once West Africa, the Gold Coast Colony in particular, have agitated to encourage a certain proportion of their population to plant soya beans for food, and bananas and other fruit both for home consumption and (later on) for export. TROPICAL LIFE has all along been most interested in all this, having followed very closely the German efforts from 1905 to 1913 to develop a fruit and banana trade in the Cameroons, and has always regretted that the estates could not have been left in British hands after the war. Meanwhile we feel that what the Germans could do and, by now, probably have done in the Cameroons, can be well and even better done, thanks to up-to-date transport facilities in the Gold Coast.

The trouble has always been to find a home market for the bananas until the output is large

enough to ship, and many proposals were advanced to help in this direction. We were at one time deeply engaged in the matter, especially over pushing the sale of banana flour, but that is long ago now. It seems, however, according to the *Australian Sugar Journal*, that in the Mackay district of Queensland, the Fruit, Vegetable and Poultry Association have been discussing the possibility of establishing a banana flour and by-products factory on co-operative lines over there. Pigs, poultry and bananas seem to go hand-in-hand in those areas. This being so, why not in the Gold Coast. Learned professors have also been lecturing and writing in Australia on the quality, price and transport of bananas and, above all, on the need of producing even "best" fruit, whether for home use or export. The production of banana figs, i.e., a sweetmeat from surplus fruit, has also been discussed. This use of bananas is, or was, very popular with the Germans.



MARKET REPORTS, GOSSIP AND PRICES.

The Costly Fiasco of the League of Nations.

"ALTHOUGH at Geneva," Messrs. De Waal and Van Overzee, the well-known cocoa dealers in Amsterdam, wrote in their Annual Report on the World's Cocoa Market, "it is generally acknowledged by the League of Nations, that Free Trade, together with the restoration of confidence, offer the principal conditions for bringing about a start of any improvement in the situation throughout the world, trading between the various countries is made more difficult every day by increasing tariff rates in several of those countries. Meanwhile, unemployment all over the world has not decreased; the financial budgets of most of the leading countries remain unbalanced and expenditure for armaments is weighing heavily on all nations, with the people of Europe already taxed to the limit of their ability to pay.

"It is evident that, if wheat is unsaleable in America, whilst people in China are nearly, if not actually, starving; if the planters in Brazil are throwing coffee into the sea whilst many people in Central Europe no longer know the taste of coffee, there must be something wrong in the world's organization. All the same, when there is a way into trouble, history has always shown that there is also a way out and we can only hope that, before it is too late, leading statesmen, now meeting each other regularly, will finally acknowledge the seriousness of the situation, and prove themselves to be strong enough to put aside, for the time being, national interests, and search for a solution, on international lines, of these difficulties for the welfare of mankind generally."

Writing thus reminds us of the very reasonable claim that A. A. B. made a little time back in the

London *Evening Standard* when he pointed out where further economies in this country could be made. This is what he said: "Whilst here at home we are making drastic cuts till nothing will be left but bone and gristle while our patient taxpayers are making heroic efforts to meet the demands of Somerset House, let us cast an eye on the extravagant expenditure of the League of Nations at Geneva of which a wholly disproportionate part is paid by the British Empire . . . whilst America, who has refused to join the League, enjoys all its advantages without contributing a cent to its cost or accepting any liability. . . . The League of Nations is costing the British Empire £350,000 a year or approximately £1,000 a day." To this we can add: and has proved itself utterly useless when up against important crises, as was proved by its failure to make Japan obey its demands. Of course Japan did not; why should she? Whoever really expected her to? Not the Man-in-the-Street in this country. He never has believed in the League, that is if he has become aware that such a body existed and knew what it was supposed to do. As A. A. B. goes on to point out, after all said and done, what is this League over which we have wasted and are wasting so much money and to whom this great British Empire (far less cute than Uncle Sam) is said to be willing to entrust the decision of points of International Law, that may vitally affect the destinies of the Empire. The nine judges of the Permanent Court of International Justice include only one Englishman, one Cuban, one Chinese, a Spaniard, a Pole and an American. Why an American if they pay nothing and have no

liability? Meanwhile Japan has turned her back on the League, and France, we are told has taken care to pack the secretariat, the committees and the Tribunal with her own nominees. Is this an exaggeration? and if not, why are we, who need all the money we have and some over, so content to put our neck in nooses that can be pulled tight any moment by others, and furthermore, be willing to pay £1,000 a day for the privilege of doing so?

No wonder trade does not prosper in this country. Who can have confidence in a political atmosphere that tolerates such things, when without confidence nothing can go ahead. Nothing is going ahead; the marvel is that everything does not go back more rapidly than it tends to at the moment.

One is all the more ready to write in this strain because, as the London *Morning Post* of January pointed out in its Money Market Notes, "At a moment when the taxpayer is patriotically supporting the State by hastening to make his contributions of income and surtax for the current year, it will be well that the Government should very clearly recognize that the public is also watching the Expenditure as well as the Revenue side of the National Balance-sheet. To establish the equilibrium in the balance-sheet at the end of next March it is necessary not only that the Chancellor of the Exchequer's Estimates of Revenue should be fulfilled, but that the promised economies should have become sufficiently effective before the end of the year to ensure savings for the current fiscal year of about £22,000,000. *Doubtless the bulk of these economies will be effected during the final quarter of the year, but the necessity of closely watching the Expenditure as well as the Revenue side of the Accounts must be emphasized.*"

Note the statement in italics which are ours. One wonders whether the money now being wasted at The Hague will be included in the economies to be made.

Moving on to our usual market gossip we will start with:—

Rubber.

Late news as we close say that the Dutch East Indies have gone from bad to worse in the balancing of their Budget, the deficit for the last three years will amount to (taking the £ at par) no less a sum than £43,000,000, or more than six months' revenue, made up as follows:—

	£ (AT PAR).
1930	11,500,000
1931	14,300,000
1932	17,000,000
	<hr/> 42,800,000

One wonders rather if the deficit would have been so severe had the N.E.I. fallen into line with us with regard to restriction in the past.

In the meantime, the report goes on to state, the majority of trees belonging to the natives will continue their growth and productiveness, to be tapped

by them as soon as ever prices are sufficiently attractive.

A gloomy picture is drawn of the present condition and prospects for British trade, though it should be remembered that the report was written before the fall of the £.

"Otherwise the position now is that the estates are exhausting their reserves and piling up unsaleable stock at a loss. At present prices, of between 2d. and 3d. for every pound produced, the only possible reward in sight is the possibility of being among the survivors of the industry."

Want of space prevents us doing more this month than acknowledge receipt of Messrs. Samuel Figgis and Son's Annual Report on the Rubber Market during 1931. In the March issue we hope to do justice to its useful contents and the carefully considered opinions and suggestions for future trading that it contains.

Passing on to current prices, Messrs. Lloyd, Matheson and Carritt report that around the middle of January, although there had not been a great deal of business passing, steady conditions ruled on the whole with spot rubber at 3½d. lb. Later it became known that the deliveries for consumption in America stood at 21,409 tons for December, against 22,943 for November and 21,493 in December, 1930, with stocks (including afloats) at the end of the year at 376,765 tons, against 369,943 on November 30th, and 258,281 tons at the end of 1930. During the next week the market became easier, the lower values being attributable to a steady daily liquidation of rubber that went on causing the price finally to drop to 2½d., and winding up on January 20th as under:—

	1932		1932		1932		1931	
	JAN. 20TH	S. d.	JAN. 13TH	S. d.	JAN. 6TH	S. d.	JAN. 21ST	S. d.
SPOT QUOTATIONS—								
Smoked sheet (F.A.Q.)	0 2½	16	0 3½	8	0 3½	16	0 4½	16
Crepe (F.A.Q.)	0 3½	8	0 3½	2	0 3½	2	0 4½	8

	JAN. 20TH		JAN. 13TH	
	SMOKED SHEET	CRÉPE	SMOKED SHEET	CRÉPE
FORWARD POSITIONS—	S. d.	S. d.	S. d.	S. d.
1932, January	0 2½	0 3½	0 3½	0 3½
„ February	0 2½	0 3½	0 3½	0 3½
„ March	0 3	0 3½	0 3½	0 3½
„ April/June	0 3½	0 3½	0 3½	0 3½
„ July/September	0 3½	0 3½	0 3½	0 3½
„ October/December	0 3½	0 3½	0 3½	0 3½

	1932		1931	
	STOCK—	TONS	STOCK—	TONS
London, Week ending, Jan. 16th		68,272		79,261
Liverpool „ „		58,662		42,270
Total		126,934		121,531

SINGAPORE QUOTATIONS—

Jan. 20th.—Spot, 9½ cents, April/June, 1932, 9½ cents; July/September, 1932, 10½ cents.

Jan. 13th.—Spot, 10½ cents, April/June, 1932, 11 cents; July/September, 1932, 11½ cents.

Balata.

This article is not often mentioned. Our latest news spoke of a quiet market, with West India sheet spot at 1s. 8d. to 1s. 9d. against a seller's

price for shipment at 1s. 8d. c.i.f. Venezuela block is quoted 11d. to 1s. for spot against a nominal price like 10½d. to 11d. c.i.f. On the spot both Panama and Iquitos are quite nominal, the first at 1s. and the latter at 3d. to 4d. per lb.

Vegetable Oils (London and Liverpool).

Liverpool speaks of a steady market for palm oil with Jan.-Feb. Lagos at £19 15s.; Feb.-March Softs at £18 17s. 6d.; Feb.-March Mediums, £18 12s. 6d.; Red Sherbro, Jan.-Feb. £18 15s. per ton. Moving on to oil-cakes, this market is steady for linseed with but little prospect for lower prices for some time to come, on account of the limited quantity obtainable. London made has been selling at £8 5s. to £8 10s., and fine Calcutta, Bombay or Spanish is valued at £7 10s. to £8 per ton. Egyptian cotton-cake is quoted £4 11s. 3d. to £4 12s. 6d. ex ship for best brands, against £5 5s. to £5 7s. 3d. for English makes. Coconut cake is firm at £7 2s. 6d. ex mill. Of Soya cake or meal we have no quotations at the moment. Moving on to the other products, we come to:—

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
Jan.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	17 15 0	15 15 0	15 12 6	15 0 0	14 15 0
20	17 10 0	15 10 0	15 7 6	14 7 6	14 7 6
16	17 10 0	15 10 0	15 7 6	14 7 6	14 7 6
13	17 0 0	15 0 0	14 17 6	14 0 0	14 5 0
9	17 0 0	15 0 0	14 17 6	14 0 0	14 5 0

Malabar copra, f.m.g.w.s. £ N/Q. Rabaul Plantation f.m.s. £14 12s. 6d.

COCONUT OIL PER TON.

	CEYLON MILL SPOT	JAN./FEB. *	ENGLISH DEODORIZED †
Jan.	£ s. d.	£ s. d.	£ s. d.
23	26 10 0	26 5 0	33 15 0
20	26 10 0	25 15 0	33 10 0
16	26 10 0	25 10 0	33 10 0
13	26 10 0	25 0 0	33 10 0
9	26 10 0	25 0 0	33 10 0

* Cylinders. † Barrels.

OTHER OILS PER TON.

	COTTONSEED CASTOR GROUND NUT FIRSTS CRUDE*	CRUDE EGYPT	LINSEED SPOT †	SOYA BEAN SPOT, NAKED	PALM KERNEL OIL ‡
Jan.	£ s.	£ s.	£ s. d.	£ s. d.	£ s.
23	40 10	28 15	18 0	15 0 0	22 0 0
20	40 10	28 10	18 0	14 10 0	22 0 0
16	40 10	28 10	18 0	14 0 0	22 0 0
13	40 10	28 0	18 0	14 0 0	22 0 0
9	41 10	28 0	18 10	14 5 0	22 0 0

Soya Bean Oil. Oriental to the Continent. Jan.-Feb. is quoted £18 5s. in barrels.

* Crude, naked.

† Net, naked, ex-mill.

‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL) CALCUTTA LA PLATA	COTTONSEED EGYPT BLACK	CASTOR BOMBAY	SOYA BEANS GROUND- NUTS	MANCH. AFLOAT
Jan.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	11 7 6	8 16 3	6 10 0	12 17 6	15 12 6
20	11 3 9	8 17 6	6 3 9	12 15 0	14 15 0
16	10 15 0	8 11 3	6 1 3	12 15 0	13 17 6
13	10 17 6	8 15 0	6 7 6	13 8 9	13 8 9
9	11 0 0	8 17 6	6 8 9	12 17 6	13 3 9

Desiccated Coconut.

The market for this article is said to be steadier with sellers of fine spot at 25s. 9d., and medium 26s. 9d., against a quotation for Jan.-Feb. shipment of 25s. c.i.f.

Coffee.

Coffee statistics issued by the Bureau of the H.M. East African Dependencies show that the following quantities of East African coffee were imported into Great Britain and Northern Ireland last year, and the proportions that were re-exported:—

	KENYA CWT.	UGANDA CWT.	TANGANYIKA CWT.
Imported as above	250,369	13,019	59,877
Re-exported	118,608	10,257	12,893
Left in G.B. and N.I.	131,761	2,762	46,984

Whilst a certain amount of controversy still reigns about the removal or otherwise of the export duties on sisal from Mexico, now we are told that on coffee that Republic has removed entirely all export duties leviable between the dates of December 7, 1931, to February 29, 1932. It is hoped that this growth of coffee will benefit by these means. As during the first half of 1931 their exports amounted to 23,217,547 bags, the loss to the Mexican Treasury should be substantial.

Last November (on the 15th, we believe) the Federation of the Coffee Growers' Associations of Sao Paulo came officially into being, and about a fortnight later the election took place of the farmer or planter members on the Governing Board of Sao Paulo Coffee Institute. *The Spice Mail*, of New York, in their December issue has much to say on the matter (pp. 1486 and 1488).

Moving to London, we have been having rather larger coffee sales of late, with East African kinds well represented and selling at fairly good rates, although some reports complain that the foreign growths did best. Prices realised included:—

Kenya.—Smalls, 72s. to 86s.; bold common, 85s. to 104s.; fair, 108s. to 117s.; good, 118s. to 134s.; seconds, 72s. to 121s.; fine, 138s. 6d. to 152s.; peaberry, 90s. to 149s.

Tanganyika.—Bold common greyish, 93s.; bold good greenish, 116s. to 123s. 6d.; fair, 113s.; seconds, 69s. to 88s.; smalls, 66s. to 75s. 6d. (in one case down to 36s. 6d.); bold greenish, 126s.; peaberry, 109s. 6d. to 115s.

Uganda.—Medium greyish, 54s.; robusta, 50s. to 56s. 6d.

Toro.—Bold greyish, 97s.

Costa Rica.—Bold common greenish, 99s. to 107s.; smalls, 70s. 6d. to 68s. 6d.; seconds 74s. 6d. to 99s. 6d.; fair, 113s. to 128s.; good, 130s. 6d.; peaberry, 85s. 6d. to 127s.

On the whole, therefore, surely one can claim that our own coffees did not do so badly.

Cotton.

The holding policy of the Southern States of America, reported *Cotton* of Manchester on January 16th, shows no signs of weakening. This is remarkable in view of the large quantity of cotton held, which is stated to be larger than at any previous time in history. The inference is that holders anticipate higher prices, though even the present basis demanded by holders is limiting the importation of cotton, with the result that stocks in this country (the U.K.) and on the Continent are comparatively small. Stocks held by the American mills on January 1st were put at 1,630,000 bales, compared with 1,655,003 last year. The World's total cotton crop is put (for 1931/32) at 27,876,000 bales of 478 lb., or 2,000,000 more than the 25,095,000 bales produced in 1930-31, when the (world) consumption was worked out at 22,232,000 bales. Roughly speaking and taking a number of years, the bales of cotton turned out were very much on a level with the tons of sugar, as per Messrs. Willett and Gray's famous lists.

The "Bears" are looking forward to a carry-over of 12,000,000 to 13,000,000 bales. "Bulls" talk of the damage in the Mississippi Valley, and of poor and damaged stored cotton. Everyone is wondering what acreage will be planted to cotton for the 1932-33 campaign. The price of cereals does not encourage such crops to be made use of, so if not cotton, what will be planted?

In face of all that has been reported of the falling off in the exports of cotton manufactures from the U.K. to India, the following table may be worth noting.

In square yards:—

	U.K. EXPORTS.		
	JAN.-DEC.	1931	1930
Bengal, Assam, Bihar and Orissa	77,021,300	345,331,500	
Bombay, <i>via</i> all ports	231,407,000	317,988,200	
Madras	59,272,200	75,803,600	
Burma	22,222,700	38,956,200	
Total	389,923,200	778,079,500	
Total export to all Countries and Colonies, &c., including India	1,716,248,900	2,406,766,700	

Moving on to prices, the following were the official "Spot" prices in Liverpool on January 15th, and on the corresponding dates in 1931, 1930 and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5.41*	5.35*	5.37*	9.56*	6.95†
Strict Middling American	5.46*	5.38*	5.52*	9.81*	7.03‡
Fair Pernam	5.41	5.28	5.52	9.21	7.37
F.G.F. Sakel. Egyptian	7.25	7.05	8.10	14.45	10.00§
Fine Broach	5.40	5.22	4.25	7.40	6.16
Fine No. 1 Oomra	5.25	5.07	3.80	7.00	6.16
Fine Bengal	4.95	4.77	3.45	5.65	5.16

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Other Products.

Coming to the more general market reports we will as usual start with tea. Indian sorts have been doing well of late, the last batch of auctions showing a good demand for Indian kinds at full prices. Ceylons also did well, selling quickly and if a drop occurred it was due to a falling off in the quality. The bids for Java and Sumatra were on previous levels, for the parcels offered attracted fair competition and so realised steady prices.

Moving on to fibres, all these seem more or less in the dumps, so much so that one already seems to hear the first sounds of new campaigns, "Use more Jute," "Buy British Jute," "Buy more Rope and Twine, British if you can, Filipino or Mexican if you can't." In any case "Buy, Buy, Buy." As things are at the moment, financial conditions on the Continent continue to depress the jute market, and however low prices go, for the raw or manufactured article, no larger amount of trade results. Dundee—by no means the only port to receive jute—seems overcrowded, as her receipts landed and afloat from August 1 to mid-January far exceed the arrivals for the whole of the twelve months in 1930/31. These, the twelve months total, came to 559,962 bales, whereas, from August 1 to date, 660,402 bales had arrived or were expected, against 361,127 last year. Values have dropped some 50s. in the month and so 70s. since the middle of November and are now quoted at £19 10s. for Firsts c.i.f. to the Continent for Jan.-Feb., against £21 12s. 6d. in our last issue, and £23 in November.

Manila hemp together with sisal is said to be receiving little or no support from the Continent. This would partly account for the drop in their values although the movements in Manila during the first eleven days in January were small. Current quotations include J No. 2 at £18 15s. against £21 before Christmas, K at £17 15s. against £20, whilst M No. 1, which was £19 10s. (against £19 before Christmas) is only £17 now, or below the price of K. One wonders why this is so. All prices, c.i.f. as usual. Messrs. Wigglesworth in their Annual Review claim that the prospect of a favourable protective tariff is helping to maintain values in the U.K. The year-end receipts at Manila showed a drop for the year from about 1,300,600 bales to under 1,100,000. In 1929, they were about 1,600,000 bales. Prices this year ranged from £35 10s. in January for grade S1 to £26 in September, from £22 to £14 for K, and from £21 10s. to £13 10s. for M1. Then coming off the Gold Standard raised the price on paper. Messrs. Wigglesworth included the following table showing where Manila hemp is received for consumption and manufacture and how those receipts have changed. The U.S.A. and the Continent have dropped whilst Japan shows an increase over last year. Why such a drop one wonders in the U.S.A.?

MANILA FIBRE RECEIPTS AT CONSUMING CENTRES.

	1931 BALES	1930 BALES	1929 BALES
U.K.	315,561	315,132	370,608
U.S.A.	233,402	483,090	557,630
Japan	349,997	300,590	386,647
Continent	171,138	224,733	209,662
Elsewhere*	65,016	101,087	92,929

* Including local consumption.

Sisal, even if we are off the Gold Standard, has gone back to £15 for No. 1 f.a.q., African c.i.f., whilst Mexican is quoted £15 10s. for G.W. c.i.f. The year closed with No. 1 East African around £16 10s. against £19 at the end of 1930, £36 10s. at the end of 1929, and £42 at the end of 1928, before which prices were lower. At present, America is considered to be holding very small stocks whilst the use of sisal in Europe and over here tends to increase. On the producing side, a carefully chosen and very competent committee has been formed to "explore the whole subject in relation to supply and demand so as to try and regulate the production on a parity with the world's needs," also, we understand, to push on consumption in every way possible.

Prices for Shellac are lower for spot trade. TN now stands at 71s., fine Orange 80s. to 160s., AC Garnet 82s. 6d., RLI Button Lac 92s. 6d. against 77s. 6d., 95s. to 170s., 90s. and 100s. respectively a month ago. Palm kernels are quoted at £11 17s. 6d. c.i.f. to Hamburg against £12 2s. 6d. before, whilst tin at £141 15s. against £137 5s. is higher but buyers show unwillingness to follow the quotations. Copper also ran up and then dropped; it is, however, higher than last month, say £40 15s. against £37 10s. for cash.

Coming to finance, London's price for silver on January 24 was 19 $\frac{7}{16}$ d. per oz. when gold after a drop of 1s. 6d. stood at 119s. 3d. per oz. The bank rate in Brussels has been advanced from 2 $\frac{1}{2}$ to 3 $\frac{1}{2}$ per cent.; all others are unchanged, say, London, 6 per cent., Berlin and Milan 7 per cent., New York and Brussels 3 $\frac{1}{2}$ per cent., Amsterdam 3 per cent., Paris 2 $\frac{1}{2}$ per cent. and the Swiss banks 2 per cent. Our usual table runs thus:—

JANUARY 24	1932	1931	1930
Bank rate	6 per cent.	3 per cent.	4 $\frac{1}{2}$ per cent.
Consols 2 $\frac{1}{2}$ p.c.	55 $\frac{1}{4}$	57 $\frac{7}{8}$	56 $\frac{3}{8}$
Bar silver per oz.	19 $\frac{7}{8}$ d.	13 $\frac{3}{8}$ d.	26d.
Exch. on New York	\$3.43	\$4.85 $\frac{19}{32}$	\$4.86 $\frac{1}{16}$

THE WORLD'S COCOA MARKET.

Bahia leads in the 1931 Imports into the U.S.A.

BY THE CONTROLLING EDITOR

THE following table—Messrs. Marccone and Co., are responsible for the figures—of the imports of raw cocoa into the three Atlantic ports of the United States, New York, Boston, Philadelphia, must cause everyone genuinely interested in the industry, especially from a British point of view, to stop and ask questions, starting right away with one on the following lines:—

"What on earth has happened to America and/or the Gold Coast Colony, that Bahia has been allowed to head the list of countries supplying the United States with cocoa during last year? What does it mean; what is the story lying behind those figures?"

To answer such questions let us take the returns first. We need not give December alone, but will say that out of a total import of 310,477 bags for the month against 206,317 in 1930, Bahia contributed the astonishing quantity of 255,646 bags against 104,320 bags in December, 1930. The Gold Coast and Lagos together totalled 22,777 bags against 33,878 bags.

Coming to the twelve months' figures, the year 1929 with its 3,375,936 bags stands head and shoulders above the others. Last year is second, 1927 with 2,863,433 bags third, and 1926 with 2,839,140 bags fourth. Of the Pacific ports, San Francisco received 32,385 bags, making a grand total for the four U.S. ports of 2,955,123 bags in 1931.

IMPORTS OF RAW COCOA INTO THE U.S.A.

Marccone and Co. Inc. Figures.

	1931 BAGS	1930 BAGS	1929 BAGS
Bahia	839,825	612,508	637,867
Accra (i.e., Gold Coast)	822,723	773,118	1,461,882
Lagos (i.e., Nigeria)	228,427	182,291	349,132
Ivory Coast (French)	114,566	54,416	—
Venezuela	121,781	104,220	146,893
Costa Rica	107,064	77,664	66,488
Sanchez (San Domingo)	358,169	277,918	300,583
Trinidad	163,061	153,592	184,198
Makes	2,755,616	2,235,727	3,147,043
All others	167,222	204,973	228,893
Total	2,922,838	2,440,700	3,375,936

Having given the figures, let us discuss possible whys and wherefores to account for so serious a push back for Accra kinds last year. Letters posted recently to New York suggested that America was shying at the tendency for the West African cocoa to get into very few hands, too few to please them, and so, since the big buy in 1929, they have spread out their nets to gather in the other growths rather than the Gold Coast. The above results in fact are considered to be not accidental but according to plan. It would be well for large scale buyers, and sellers too, to try and find the truth for this, as the tonnage of the Gold Coast, apparently 237,600 for January to December, according to the coming table, is altogether too immense for the biggest buying country—one equal

to France, Germany and England, joined together—to pass it by, for an output one-third or less than one-third the size, and so put this Brazilian David at the head of the poll against the African Goliath. Quotations and prices for Accra kinds have been over-low all the time; but then so have Bahias. Is it that Uncle Sam, realizing the better value of the South American growth at the same price and even occasionally lower, has gone wholeheartedly for Bahias and only taken Accras as and when it suited him?

If this is the case, those who have been sending the Gold Coast cocoa so slowly to market because the prices offered them were too low to encourage more rapid movements, will be wise to sit up and think where and who will be calling for what is left of their cocoa. Bahia has had a full crop, quite 1,200,000 bags, may be a little more, but all through she has been a seller. With exchange all in her favour, she has not been so hard hit as the Gold Coast which has the American exchange so against her. As regards printed values of 4 to 4½ cents, producers at both centres have done equally well (or badly), but probably the ultimate profit to the African sellers will work out less than those which go to the Bahia traders and growers, unless of course West Africa scores over the freight. She ought to do so, being so close to both America and the U.K. or the Continent. In 1930 (January to December), out of 1,082,460 bags of Bahia cocoa shipped, the U.S. got rather over 650,000 bags, including all her ports, leaving therefore, about 350,000 to go elsewhere; Buenos Aires took 69,000; Germany, France and Holland 180,000; London, &c., a few bags each, i.e., the remaining 100,000 bags between them. London got 7,242 bags and Liverpool 50 only, or 7,300 together.

This being so, if in 1930 America left 350,000 bags for other countries out of an output of just over 1,000,000 bags of Bahia, one is looking forward to receiving the Bahia table for 1931, to see who has received, or who seems likely to be owning the 400,000 Bahias (putting the total crop at just over 1,200,000) bags that Uncle Sam did not require. As the German deliveries for consumption approached 80,000 tons, she may take a fair share, and Buenos Aires, being so close to Bahia, is likely to back her up, as was the case in 1930.

Gold Coast News.

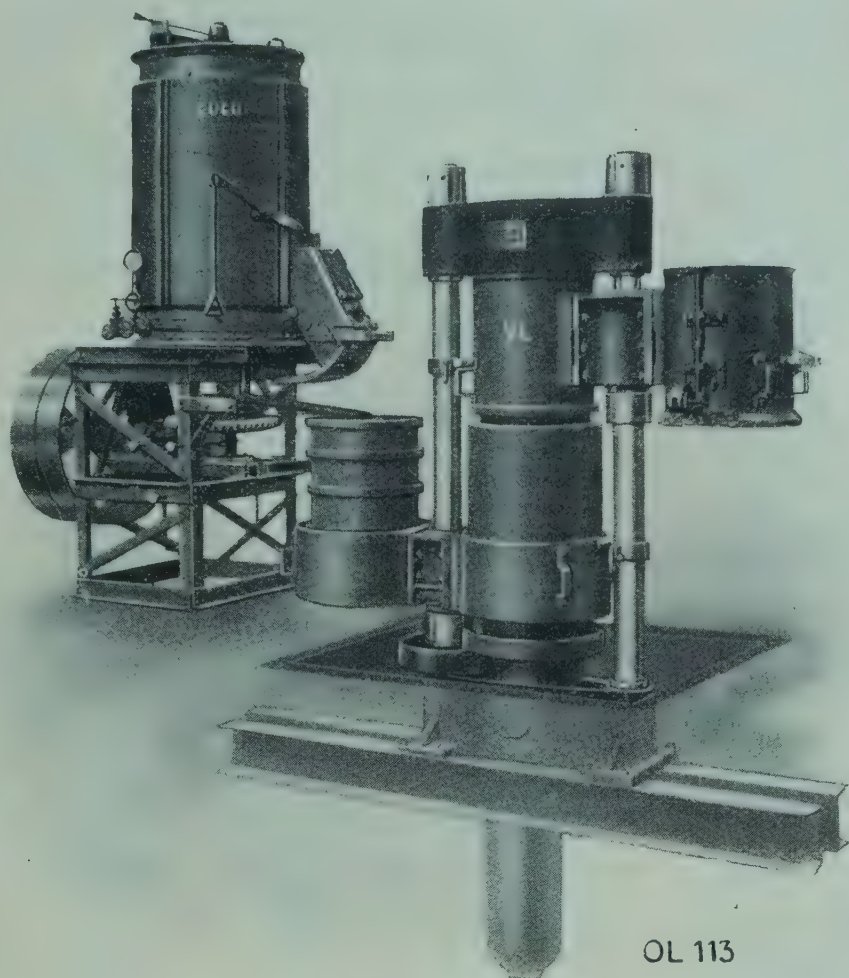
Reports about the Gold Coast and her cocoa continue to be contradictory, but the most emphatic if not the most reliable later news speaks of the output as coming forward in large quantities. During December, the Gold Coast Information Bureau, Ltd. (Criterion Buildings, Piccadilly, W.1.), reports that 35,893 tons were shipped, and then later said that during the first half of January the exports amounted to 29,531 tons, against 25,942 tons for the whole of January last year. Twelve months ago the full force of the movements after the 1930 hold-up was beginning to be felt about

now, and in February, March and April the exports were heavy, as will now be seen. One wonders rather how the same months this year will compare with those of 1931. Here are the official returns:—

GOLD COAST EXPORT—JANUARY-DECEMBER.			
	1931 TONS	1930 TONS	1929 TONS
January	25,942	34,659	48,048
February	41,720	19,078	30,219
March	41,659	21,201	28,247
3 months	109,321	74,938	106,514
April	32,778	9,522	13,831
May	9,874	14,038	10,527
June	10,081	12,923	8,263
July	6,319	17,855	5,598
August	3,220	11,391	4,323
September	5,599	6,163	3,698
9 months	177,192	146,830	152,754
October	5,598	11,251	15,634
November	18,856	15,031	34,537
December	35,893	13,661	29,563
12 months	237,539	186,773	232,488

Total Gold Coast exports in January, 42,360 tons.

Before leaving the Gold Coast, let us comment on one matter. A leading concern spoke some little time back of losing over £500,000 in connection with their dealings in cocoa. Without wishing to be sued for libel, one feels constrained to say that the bulk, if not all, of this vast sum must have gone into the pockets (or their equivalents) of those who produced and who sold the cocoa to these traders. In other words, the actual producers were overpaid and yet in October, after the Director of Agriculture of the Gold Coast had addressed the members of the Agricultural Society in Trinidad, one of the members, instead of querying the output of the Gold Coast in 1930, or asking what had become of the 83,000 tons carried over, found fault with the shippers for overpaying the producers. This was not as the critic expressed it, but surely if any blame was attachable to those 1930 deals it was due to the over-liberality of the shippers. The Trinidad critic said "he was sorry that it struck him that Mr. Auchinleck had missed the point with regard to the grievances of the African producer. . . . The point was, the exploitation of the native farmers by the African merchants, who banded themselves with the native brokers and, keeping their feet on the necks of the producers, squeezed them to death." One has to feel glad that the head of the Gold Coast Agricultural Department has come face to face with an individual member of an important fellow-colonial society who feels able to speak in such a manner. One can only wish that the head of the trading concern which has lost that half million sterling could also be faced by such a speaker. Until the truth all round as regards statistics, costs, and conditions of the producers and their labour forces are better known, one can only suppose that these outbreaks will have to be tolerated. They do, however, much harm in more ways than one. It is to



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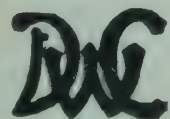
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he hoped that as we become more civilized they will cease.

The Board of Trade Returns for 1931.

After all, if we do end the year 3,300 tons to the good as regards our deliveries for Home Consumption, it is disappointing to have to report that with so much raw cocoa moving about or stagnating in the world, we could not have ended last year with increased deliveries for H.C. in December, instead of a deficit. The drop may not be a great one—152 tons—but still, it is not an increase and that is what all of us wanted to see.

During December alone, 8,504 tons were imported, including 8,094 B.W.A., as compared with 5,433 and 4,650 tons last year, whilst 3,945 tons went for Home use against 4,097 tons in December, 1930, and 3,966 in 1929. The full table works out as under:—

BOARD OF TRADE RETURNS. JANUARY—DECEMBER.

RAW COCOA	LANDED	INCL. B.W.A.	DEL'D. H.C.	EXPORT	STOCK DEC. 31
	TONS	TONS	TONS	TONS	TONS
1929	77,104	69,285	57,497	10,653	30,850
1930	59,478	51,121	56,993	4,944	28,050
1931	65,769	57,462	60,291	4,471	29,250

Inc. 6,291 Inc. 6,341 Inc. 3,298 Dec. 473 Inc. 1,200

Both the *Gordian* of Hamburg and Messrs. De Waal and Van Overzee of Amsterdam have published estimates for the world's production and

consumption of cocoa last year. Two little changes can be made as we now have the exact figures; first of all the Gold Coast export was 237,539 tons, and so the total production can be put at 539,539 tons, and then, on the consumption side, we needed only 60,291 tons of 2,240 lb. against De Waal's estimate of 62,000 tons of 2,204 lb. All the same, here are the figures as that firm published them:—

World Production.	1931* TONS	1930 TONS	1929 TONS
Accra	227,000	187,000	232,500
Bahia	74,000	64,000	61,000
Nigeria	52,000	52,000	55,000
Trinidad	27,500	24,000	28,000
Guayaquil	12,000	17,500	16,000
Sanchez	27,000	20,500	21,000
San Thomé	14,000	12,000	15,000
Venezuela	20,000	16,000	22,000
Other Countries	75,500	83,000	76,500
Totals	529,000	476,000	527,000

Consumption.	1931* TONS	1930 TONS	1929 TONS
America	180,000	165,000	220,000
Germany	80,000	76,000	80,000
England	62,000	57,000	57,500
Holland	58,000	52,000	50,000
France	39,000	37,000	35,000
Switzerland	12,000	7,000	8,500
Other Countries	95,000	89,000	89,000
Totals	526,000	483,000	540,000

* Estimated.

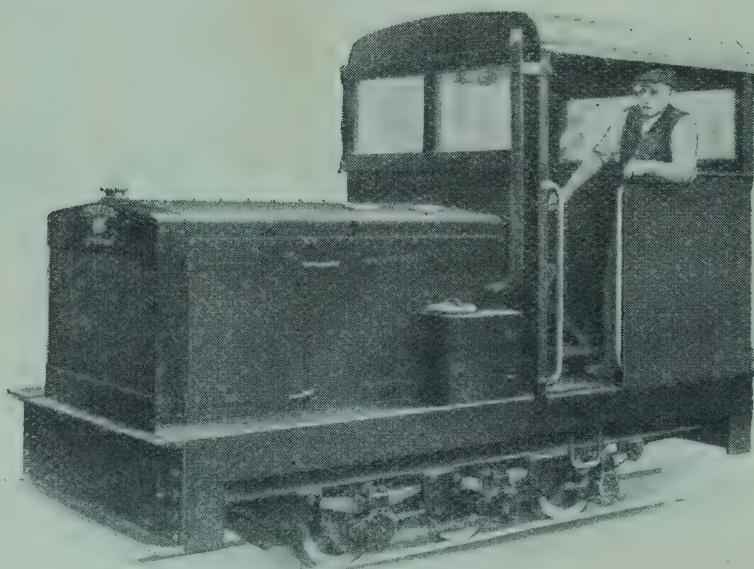
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STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ „
20/35	4 „
40/50	6 „
40/50	8 „
40/50	10 „



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ „
20	2½ „
20	4 „
27	5 „
50/70	10 „

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IN TOUCH WITH EVENTS

Reports from Cyprus speak of the heavy losses of sheep and goats in that island towards the end of last year from parasitic worms in the stomach, intestines and lungs.

* * *

Mr. John S. L. Gilmour, B.A., Curator of the University Herbarium and Museum, Botany School, Cambridge, has been appointed to the post of Assistant Director, Kew, rendered vacant by the death of Dr. T. F. Chipp. Mr. Gilmour was educated at Uppingham School and Clare College, Cambridge, where he took the Natural Science Tripos, Part II, Botany, in 1929.

* * *

"Doubtless the Dutch Government is now more in favour of rubber restriction than it has ever been in view of the grave loss of revenue that the Dutch East Indies have sustained—a loss so heavy that the solvency of this Dutch colony is at stake." —*The Malayan Tin and Rubber Journal*, January 15.

* * *

The shareholders of Barclays D.C.O. Bank are to be congratulated on securing Mr. Raoul Hector Foá, partner in a leading firm of bankers and discount brokers, as their deputy chairman in place of the late Sir Herbert Hambling, to whose death we referred last month (p. 31). Formerly chairman of the Anglo-Egyptian Banks, now merged in Barclays D.C.O. Bank, Mr. Foá's widespread experience will stand his colleagues in good stead.

* * *

Reports from Cyprus complain of poor markets for their flax and tow. All fibres just now are, of course, equally affected by this complaint, but with respect to the Cyprus product, those we have approached with a view of urging them to put some "push" in its sale tell us that from time to time in the past the parcels received have not been particularly satisfactory owing to the irregularity or unevenness of the contents. If orders are to be obtained therefore this opinion must be altered, and that can only be done by collaboration between the producers and shippers on the island.

Those who are, or who may be, troubled by coconut moth in their palms should send us an order for "The Coconut Moth in Fiji," by Messrs. J. D. Tothill, D.Sc., T. H. C. Taylor, B.Sc., and R. W. Paine, B.A., published for the Fiji Government by the Imperial Bureau of Entomology in London. It is, of course, thoroughly reliable in every way. The work is put up as Imp. 8vo., pp. vi + 269; 12 coloured plates and 22 black and white plates, together with 121 figures in the text, and a map. Price 31s. 6d., postage 1s. 6d. extra.

* * *

Talking of Fiji is a reminder that we have to acknowledge copies of Nos. 3 and 4 of the *Agricultural Journal* issued by the Agricultural Department of those islands. Price 1s. each. Issued quarterly, copies are obtainable on application to the Director, at Suva, Fiji. Vol. 4, No. 3, deals mainly with the improvement of the island's copra, whilst No. 4 discusses fruit production and shipment and includes papers read at their Agricultural Conference last October on "Banana Growing" and "Banana Pests," whilst a third paper deals with "Cattle Breeding and Beef Export." This latter journal should interest our friends in the Gold Coast Colony, where efforts are being made to develop a banana and fruit industry. The financial position in 1932, we are told, will only permit the publication of two (not four) issues of the journal. Whatever number appears we do suggest that an index be introduced, or at least the subject discussed be named at the top of each right-hand page. The discussions are well worthy of this little attention.

* * *

The Queensland Agricultural Journal for November contained a useful article on "Citrus Culture" by their Director of Fruit Culture (Mr. George Williams) and M. R. L. Prest (Instructor in Fruit Culture). Our West African friends may be interested to read what these authorities have to say on the matter. For instance, the first paragraph concludes by saying, "Before we can anticipate an appreciable export trade in oranges, production in districts beyond the range of influence of coastal atmosphere must be effected."

Will it be the same in the Gold Coast should producers (as so many do) wish to try their luck as near the coast as possible in order to get the produce on board at the lowest possible rate? Oranges, mandarines and lemons are discussed and freely illustrated. The soil, the lay-out, planting-boards and planting, varieties, pruning, training and fertilizing and colouring are each taken in turn.

* * *

Reports tell us that according to official statements the Rt. Hon. Stanley Bruce, formerly Prime Minister and Minister for External Affairs in Australia is coming to London after the Imperial Conference to represent the Commonwealth of Australia as their Resident Minister on this side. One feels sure that all welcome even the rumour and trust that it will become a fact. When that is so, both Mr. and Mrs. Bruce will be warmly welcomed in London and elsewhere.

* * *

Other items of news which may affect Australia since Queensland produces over 500,000 tons of sugar a year, is that Java, which produced 8,166,000 tons as her last three years' crops (averaging 2,722,000 per season), will cut down her crop for 1933 to 1,496,350 tons, if not to 1,400,000 tons only. The idea seems to be that if Java agrees to do this, Cuba this year may drop her output to 2,180,000 tons. It will be a shameful treatment of the island producers if this further squeeze—from a possible 6,000,000 tons—is made, especially as America has no idea apparently of cutting down the output of her home-grown sugar. Our leading article last month, p. 32, discussed this matter, so there is no need (but plenty of will) to say more here. Next month we shall show what a leading American broker thinks of the position, and then leave it at that.

* * *

Our thanks are due to the Empire Cotton Growing Corporation for sending us a copy of the bound reports received at headquarters from the various experiment stations during the year ending June 30, 1931. Starting to peruse the contents, one is pleased to see every sign of Dr. J. C. Willis, Sc.D., &c., who edits most if not all of the publications of the Corporation, being in excellent order mentally and physically, otherwise one feels he could not have summarised the contents of the volume and the position of affairs in the masterly and interesting way that he has done with regard to cultivation, pest warfare, &c. For the modest sum of 2s. 6d. post free you can secure a copy and learn much about cotton growing throughout the Empire; Queensland, S. Africa, the two Rhodesias, Swaziland, Uganda, the Sudan, Fiji, West Indies, Iraq, Nyasa and Nigeria; quite a lot for your money.

"The results of a large number of experiments spread over a number of years in connection with the use of fertilizers for rice growing in the Mysore area of India go to show that all the natural and artificial nitrogenous manures are more or less beneficial to paddy, but they are more economical when applied in conjunction with bulky organic manures." Extract from "Notes on Sugar-cane Cultivation in Java," i.e., a most excellent report drawn up by Mr. Leslie Coleman, C.I.E., &c., Director, Department of Agriculture in Mysore, after his visit to Java and published in *The Journal of the Mysore Agricultural Union*, vol. xii, 1931, No. 3, price 1s. 2d. post free, from the Secretary of the Union, Seshadri Road, Bangalore, S. India. Plough engineers, fertilizer makers and makers of modern machinery for sugar production from sugar cane should be specially interested in what Mr. Coleman has to tell us.

* * *

President Roosevelt, Viscount Grey tells us in his Fallodon Papers, arranged to travel as soon as he ceased being President, and Mr. (afterwards Lord) Bryce wrote to Lord Grey, then our Foreign Secretary, to that effect, saying that Colonel Roosevelt particularly wanted someone who knew the birds of England and their songs to go for a walk with him. It was an ideal task for Lord Grey, and so the two came together, the Foreign Minister of England and the ex-President of the U.S.A., and went "hiking" like any young couple, only that somewhat slangy term had yet to be invented.

* * *

The one condition made was—no reporters, no pressmen—the birds object to all but genuine bird lovers: evidently the ex-President fully equalled our Foreign Secretary in this matter. For twenty hours (not miles) they were lost to the world, and went to hear the birds sing as they must have sung before the Romans came to England. "I found," writes the English Minister, "that my visitor not only had a remarkable and abiding interest in birds, but a wonderful knowledge of them. He knew the birds of this country but not their song. He had one of the most perfectly trained ears for birds' songs that I have ever known. He picked out the blackbird as the best songster. I too have always felt so."

And so these two great men found pleasure and recreation in listening to the songs of birds. No one who has the least love of the country in his tastes will wonder at their choice, blackbirds, thrushes, tits, finches, robins, linnets, are all there quite near to London and we know at least one man who also spends time watching and listening to them, and that, too, on his own lawn.



La Finca "Ruínas de Aké," another set of buildings to house scutching, decorticating and other machinery used for preparing the sisal for market.

LETTERS and photographs concerning the present state of Labour in Yucatan continue to arrive and they trounce us severely but politely for our leading article last September. We always hoped that we had a good circulation in all sisal producing centres; we know now that we have an excellent one in Yucatan and have been carefully read and freely discussed during the past three or four months. The kindly letter—in spite of his vexation over our views on labour conditions out there—that we published last month from Señor Rafael Peón showed this very plainly, but other letters that have since been received more than confirm our first correspondent's letter in all ways.

Referring to Mr. Steer-Webster's article in our December issue, Señor Peón says he found it very interesting and that "it shows a great difference with our experience in Yucatan. This is no doubt due to the different soil. When I have the time, I will try to show this."

Señor Felipe G. de Solis, the owner of several estates, sends us some up-to-date photographs and has even gone to the trouble and expense of having their genuineness attested by a local notary and our Vice-Consul at Merida. We certainly appreciate all this, and have pleasure in reproducing three of the photographs on this and the opposite page.

The same as with the other planters, Señor de Solis dwells on the changed condition of the Maya and other labour out there. "For the past three or four generations in all our estates," he writes, "not only on the fibre plantations, the lodgings erected and offered free of charge to the workman are splendid. In them the workers take up their residence of their own free will, being free to move in or out for as long as they wish, many years is often the case (that they remain). Schools for the instruction of children and also of the men, are provided by law, whilst such means of recreation as base-ball fields, moving pictures, play fields and dancing halls, as well as skilled services in the shape of doctors, medicines and hospitals are provided free by numerous farmers.

"On one of my estates, known as '*Ruínas de Aké*' (of which I send several photographs),

families have lived for many years, some two hundred and sixty families, making a total of about 1,000 souls, Maya born and others, men of various races, and this would not have been the case had the people been ill-used. On this estate there are 6,000 acres of sisal. It is situated thirty kilometres from the City of Merida and is bounded by the railway. It is a spot with many ancient and historical Maya ruins which are visited by tourists from every country. The photographs sent will show that the workers live in good and comfortable houses, repaired yearly at our expense."

Others write in the same vein, and on the page facing this one will be found two of the many photographs sent by Señor de Solis. Cultivators of sisal, therefore, outside Yucatan must realize what the condition of the Indian and other workers over there is to-day, and what they have to compete against in labour and other costs. Telling a story rather against ourselves, we can remind our readers that soon after the War had started Mr. Arthur Diosy, who founded, or was largely instrumental in founding, the Japan Society in London, and knew Japanese as well as he did English, figured in T.L. as "Our Friend," and at the time, without making any comment on the condition of the native Indian workers, he did say that when he visited Yucatan he found a number of Koreans were working on the sisal estates and were satisfied enough with the state of affairs to write home and arrange for more Koreans to join them. "As we spoke only in Japanese," added Mr. Diosy, "I am sure the men were speaking the truth, as there were none around who knew that language."

From elsewhere we are told that during recent years the Federal Government has seized large tracts of lands from the owners and divided them evenly among the labourers. Photographs have been sent to show this, but it is not possible for us to show more than the one. As they are much the same, i.e., a number of men round a table, such photographs carry less impression than do those of the buildings. Official returns are said to show that 3,823,990 acres of land have been distributed among 20,764 individuals.

With regard to output, one letter claims that a few years ago Yucatan produced 1,200,000 bales of sisal, against about half that quantity now, so that whatever other producing centres are doing it can be seen that Yucatan has cut back her supplies very drastically. The returns of the exports of sisal from Yucatan, or rather from Mexico, to be found on p. 22 of our last issue would show, at $5\frac{1}{2}$ bales of 400 lb. to the ton, a much smaller export, if not production, last year than the above, viz., 385,000 bales last year, against 572,000 bales in 1930 and 555,000 bales in 1929. These last returns, of course, run very close to a rough estimate of 600,000 bales.

"Generally speaking," Messrs. Wigglesworth's report of February 17 tells us, "conditions have shown improvement which to some extent may be put down to the seasonal movement although somewhat delayed compared with other years. The market has responded to these periods of buying, prices showing a tendency to advance sharply while the demand lasted. A greater measure of control, however, appears to be manifesting itself so that it is no longer the experience to have uncontrolled shipments of unsold sisal pressing on the market near at hand in excess of actual trade needs. There is no doubt African sisal is attracting far more attention nowadays and with prices several pounds below its intrinsic value, measured in terms of other hard fibres, it is not surprising that the increased production is finding its way into consumption for all classes of cordage, twines, &c."

"It is noteworthy that the larger output from Africa in 1931 has been absorbed despite the long abstention in buying on the part of the larger binder twine users in U.S.A. All this tends to substantiate what we have frequently mentioned, viz., the increasing use for ply goods and other forms of fine twine spinning. Unfortunately prices do not respond sufficiently to give an adequate return to producers and grave concern is expressed in more areas being forced to stop working. At one period it was understood preference under the new tariff bill would be given to Empire grown fibres affecting amongst others Kenya, Tanganyika, Nyasaland sisal, whilst sisal from Java and Mexico, and Manila hemp, &c., would be subjected to a 10 per cent. duty, but this has not proved to be the case. Keen disappointment is expressed in East Africa on this account."

Now we know that all fibres have been taken off the free list, except that produced from *Cannabis sativa* or true hemp, one hopes that the spinners of rope and twine in this country will carry on to complete success the efforts now being made to prove that British sisal is as suitable for them as any hard fibre.

At a Special Meeting of the Executive Council of the Joint East African Board held on February 17, before it was known that British hard fibres would benefit by a duty on their non-British competitors, the following resolution was passed regarding the position of the East African Sisal Industry in relation to the Import Duties Bill:—

"The Joint East African Board being deeply concerned in the general and industrial welfare of the East African territories respectfully urges H.M. Government that instead of placing Hemp on the Free List and so closing the door to investigation of the relative value to industry in this country of British Sisal and foreign Hemp they should leave this question to be investigated impartially by the Tariff Commission about to be set up. In submitting this representation the Board emphasizes the importance of the East African Sisal industry in relation to the finances of the territories."

Why does the J.E.A.B. and many others interested in sisal, Manila, Mauritius or New Zealand fibres trouble about what the Government proposes to do with hemp? None of the above fibres are Hemp and no law or botanist can claim that they are. There is only one plant which supplies Hemp, viz., the Indian and probably Persian plant, *Cannabis sativa*; Hemp and the others may all be fibres, but no fibre, except that from *C. sativa*, can be classified as Hemp. Slack terms, even in leading books like Carter's, on the subject will not alter this fact. Because hemp is not to be removed from the free list that does not mean that non-British fibres, sisal and Manila, &c., will not go, for they are not hemp and nothing can make them so.

Referring to the correspondence out East, in the *Straits Times*, *The Planter* of Malaya and *Malayan T. and R. Journal* over the Birkemose system of rubber forestry, we have wondered more than once whether tactful and practical experts trained among the rubber, cacao and other trees could, at times, help those industries to turn out their supplies more cheaply than at present. In the same way as heavy costs are at times added to labour bills in factories through preventable causes affecting the health, the will-to-work and the output of the staffs, so too can trees on an estate cost more than is necessary by putting forth yields lower in quality and quantity than they should do. Without causing the company directors at headquarters to bristle-up against such a proposal, more important still without hurting the feelings of excellent officials of Agricultural Departments, we throw out the suggestion that forestry offices for economic crops are needed the same as those for the natural forest areas. Do our present Conservators of Forests cover this ground; have they ever been invited to do so?

Stockfarming Section.

BY THE CONTROLLING EDITOR.

The *Queensland Agricultural Journal* when talking of the world-wide demand for British Breeds of Pigs (in marked contrast to what out-of-date pessimists are saying in this country) tells us that the National Pig Breeders' Association of England reports that during 1930 over 300 pedigree pigs were exported from the British Isles to overseas customers. During the last three months of the year forty export certificates were issued in respect of pedigree Large Whites, Middle Whites, Tamworths, Berkshires, and Wessex Saddleback pigs. Many of the orders were "repeats," which affords further proof of the value of British pigs for improving the standard of the breeds in other countries. Their 1930 volume of trade was a not inconsiderable contribution to Britain's agricultural export trade, and one which indirectly benefits many others than the actual vendors of the exported stock. Among other countries, stock were sent to Latvia, Hungary, Portugal, France, Poland, Kenya, India, Japan, Germany, and Australia. Our comment on this good news is "Well played, British pigs!"

Our friends in Fiji who are working to establish a dairy farming industry in the drier areas over there, should secure a copy of the annual report of Queensland's Under-Secretary for Agriculture and Stock (Mr. Graham), in which he speaks of the remarkable development of the dairy industry in Queensland both as regards the greater quantities secured and the better quality of those greater quantities. Thus he states that the excellent butter output of the 1929-30 term, until then their peak year in dairy production, was exceeded by 16,790,490 lb. The total quantity of butter manufactured was 92,894,101 lb., eloquent evidence of the remarkable progress of the dairying industry in this State. Seasonal conditions were generally favourable, and enabled production to be uniform throughout the period. The industry, like all others, was affected by the general economic situation. The first half of the year was a period of falling values, bottom being reached in December; from then on a recovery was made, to be followed by a depression to the mid-year level in the closing month of the term.

A very satisfactory feature of the year in dairying was a decided enhancement in the quality of the product. The actual percentages were 88.19 for choice and first, 8.26 for second, and 3.55 for third grade. It is obvious, however, that there still exists room for grade improvement, and educative effort by the Department is being directed unremittingly to the gradual elimination of the lower grades. Quality improvement is, however, a progressive factor in the industry, as will be confirmed by reference to previous annual reports.

For fuller details see the opening pages of the December issue of the *Q.A.J.*

Moving on to pig-raising, Mr. Graham said that circumstances had been favourable throughout the districts in which the industry is carried on. Standards are improving and production was well maintained. Prices for pigs, unfortunately, fell far below the values of previous years, and as much as 50 per cent. under the 1929 level. In the last month of the year, however, values advanced from 3½d. a lb. to 4½d. a lb. for prime baconers, but according to computations of two years ago, when it was considered that 7d. a lb. dressed weight was the lowest price acceptable for best baconers consistent with reasonably profitable production, present prices are well under cost. The frozen pork trade provided fair prospects for greater development, and overseas consignments won high commendation on the London market where, in October, porkers brought from 6¾d. to 8½d. ex store, and baconers from 6¾d. to 8¾d. c.i.f. Though these values were not constant, they indicate the export possibilities under normal business conditions. The economic circumstances of the industry were studied closely, and every encouragement given to co-operative effort and service.

Potash Usually "Steps Up" the Results.

"While marked increases in pasture improvement usually result from liming and phosphating, experimental evidence also favours the use of potash in pasture fertilization." Thus writes George B. Mortimer, Professor of Agronomy, Wisconsin College of Agriculture in "Armour's Farmers' Almanac" for 1932, and then he goes on to say: "Studies being undertaken on six large permanent pastures in Wisconsin gave an average increase in yield of 23 per cent. for liming and phosphating on five of them, and when potash was used in addition, the increase averaged 39 per cent. These results were had the year the applications were made. When liming and phosphating fail to make a marked improvement on old worn pastures, the need for potash should be carefully studied. In the judgment of the writer, it is sound recommendation to advise potash fertilization along with liming and phosphating. Complete mineral treatment (lime, phosphorus and potash) usually effects a more decided improvement than a combination of any two of them.

Nitrogen Makes an Acre of Pasture Go Farther.

"Nitrogen fertilizers speed up the pasture by putting a 'punch' into the growth. When used with mineral fertilization a pasture is made to

perform at a maximum in every way, because they develop the qualities most desired for grazing lands. Yields of grass are from two to four times as great on pastures fertilized with nitrogen.

"An illustration from a natural setting will serve to help prove how yields of grass grow under the influence of nitrogenous fertilizers. This spring on a permanent blue grass pasture, the growth of which was very much spotted with last year's urine droppings, the writer measured the grass produced on several such square yard areas, and likewise on equal areas just aside from these spots. The comparison of grass harvested was in the ratio of 3.5 lb. to 0.75 lb. In other words the urine treated grass was producing by May 21, 8.47 tons of green grass per acre against 1.81 tons for untreated grass. While this is but an illustration of the effects of nitrogen taken from Nature, it may be reproduced at any time through the use of commercial nitrogen. We are doing it each year in our pasture studies.

"Pastures not only yield lots more grass during the season, but it is spread more uniformly at the most critical periods. Early grass and late grass are among its most striking effects, for it acts like a spell of warmth in the midst of weather still too cold to force much growth. For the past two seasons in Wisconsin, nitrogen treated grass was ready to be turned on to by May 5 instead of May 20 to 25, the usual date. This means a saving in barn feeding and work and sends the milk flow upward.

"As an average for the 1929 and 1930 seasons, a limed, phosphated and potashed pasture in Wisconsin yielded 90 per cent. more grass by June 1 than did the same pasture untreated, and when 200 lb. of ammonium sulphate (nitrogen) an acre were added there was yielded 216 per cent. more grass. From July 9, the time when permanent pastures usually begin to wane in active growth, this same pasture produced 46 per cent. more grass for mineral fertilization and 149 per cent. more to the credit of nitrogen with mineral treatment. While this is but one example showing what pasture fertilization does, it has been duplicated many times in pasture studies ranging from the Atlantic to the middle west of this country.

Nitrogen Fertilization Increases Protein.

"Nitrogen fertilization has attractive possibilities in the production of protein, the stock in trade of all dairy farmers, for it has been discovered that grazing grass analyses from 4 to 7 per cent. more protein in its dry matter when treated with nitrogen. This fact together with the larger yields obtained may make the pasture a centre of protein production, thereby effecting a saving in the purchase of this commercial feeding stuff.

"Pastures fertilized with nitrogen have thickness and life put into their turfs, and with this quality acquired, weeds disappear and the depredations of

the white grub, so common to mismanaged pastures, are stopped. In 1929, a good grass season in Wisconsin and surrounding States, mineral fertilized pasture went 153 per cent. beyond the same pasture untreated in grass production. At the same time nitrogen with mineral treatment yielded 159 per cent. more grass. In 1930, an exceedingly bad grub epidemic hit pastures in many sections. The least injury was done on nitrogen treated grass for the same pasture referred to made an increase of 138 per cent., while the portions treated only with mineral fertilizers dropped from 153 per cent. increase to but 47 per cent. owing to extreme grub injury. This spring, 1931, on May 21, the nitrogen treated area was yielding grass at the rate of 2,800 lb. an acre against 960 lb. for the mineral treatment, or nearly three times as much, and by the close of the season the difference will be tremendously exaggerated. The effects of nitrogen fertilization on pastures are too numerous to stop with mineral treatment alone."

According to the report issued by Mr. R. E. Montgomery, Adviser in Animal Health to the Secretary of State for the Colonies, after his visit to the West Indies, British Guiana and Bermuda, "there is no question but that the natural pasture lands of most West Indian colonies can be improved, and the results of manuring sour grass (*Andropogon pentussis*) in Barbados, have been most beneficial. The work of the Cambridge School of Agriculture and that done in South Africa, upon light and heavy stocking, close grazing, &c., is worthy of repetition." This subject requires careful work and experimentation under West Indian conditions. Undoubtedly the effect of artificial manures on such grasses as guinea, elephant and sour is very beneficial, but in several instances it is only with the greatest difficulty that good permanent pastures can be maintained indefinitely under tropical conditions. In a recent experiment, the writer has seen a pasture manured before last year's dry season which, instead of yielding a crop of grass, gave nothing but a heavy growth of weeds immediately after the rains had fallen."

The new issue of the *Rubber Guide* (see T.L., January, p. 12) is identical with that for 1930, but brought up to date and showing recent amalgamations and reconstructions. It also includes authorized and issued capital, accounts for four or five years, crops, dividends, and names of directors, secretaries, &c. Details are included as well of acreages planted and areas in bearing, as well as of properties closed down—one hopes temporarily—on account of the low price of rubber, together with recent prices, highest and lowest. Price 7s. 6d., postage 8d. extra for abroad.

REVIEWS.

The Coconut.

BY PROFESSOR COPELAND.

The Question of Machinery.

MOST of us in the temperate zones, ever on the look-out for markets to ship our machinery (to make everyone rich in no time) and manufactured goods generally, will turn as the writer did to the chapter on coconut products, especially to the section to do with the drying of copra. When you do so, you cannot help being disappointed at what you find, although you should be glad that you have not been one of those patient Griseldas who, having designed the perfect drying system, say in 1915 or 1916, when the two editions of our coconut book ("Coconuts—the Consols of the East") were issued, have spent their time and substance ever since waiting for buyers to share their enthusiasm over the invention and buy the apparatus by the dozen.

Taking the entire Chapter VI on "Coconut Products," compare what is said in the new arrival with what was published in greater detail in our book, 90 per cent. of which was culled from the Philippine literature of that time. Having done so you must feel sorry that so little progress has been made, even in the Philippines, all along the line. This naturally makes you wonder what research work the Empire workers have done during the last fifteen or sixteen years. From a scientific point of view possibly much advance has been made, but from the engineers' point of view, taking drying as an example, are we any nearer solving the question of mechanical drying on a large scale than we were with our systems of drying houses for hot air and fitted with fans? We hope that any and every firm interested in heating apparatus on a huge scale, from the stoves at one end to the fans at the other, will carefully read what Professor Copeland has to tell us in the year of grace, 1931, and compare his single sectional diagram (p. 218) with our proposals. If this is done, no one can help wondering why greater strides have not been made in designing the ideal dryer *en gros*, and why our own areas (if native-owned there are the authorities over them) seem still less interested in the matter.

If coconuts, i.e., copra, are successively to compete against their more successful rivals of late, the one thing to do is to design an ideal dryer, for the copra of the ten million trees (see February, p. 25) to be put in at one set of doors and emerge thoroughly dried and clean from elsewhere. Whose fault is it that our engineers have not been doing a good trade in large-scale dryers since the Great War came to an end?

From copra the book at p. 223 passes on to coconut oil. During the last ten years how much

money, in the U.K. and Europe, has been spent as compared with the U.S.A., for coconut oil machinery, and even for desiccated coconut plant which America has been calling for during that period. We know of no maker of desiccated machinery in this country except our old friends the Tyneside Foundry and Engineering Co., of Elswick, Newcastle-on-Tyne, who have made a thorough study of the matter right through, to the great advantage of New Guinea and other centres where these plants are in demand.

Reverting to oil, we are reminded that in Java coconut oil is extracted by the same locally-made apparatus as is used for peanut or groundnut oil, and the method is not so good as that used in the Philippines or Ceylon. The "chekku" system in Ceylon seems going ahead, but offers, apparently, no trade for our engineers. A more advanced system of oil making is by means of the "kabayawan," or convex iron burr. Engineers on this side would be well advised to study the page (p. 226) discussing this process to see whether it could not be adapted in their machines for use on the estates in the tropics. Of big scale extraction methods, the last paragraph but one of the book (p. 227) mentions maceration of the copra and separation of the oil, and the last paragraph of all speaks of the "expeller" as the latest method. One would have thought that a full 20-paged chapter could have been devoted to coconut-oil extraction by power machinery, we are sorry it is not so. No blame is attached to the author for such an omission, but surely those who make such machinery should have known the book was coming and secured a hearing in it. Since they have failed to do so, may we add that the pages of TROPICAL LIFE will always be open to makers of repute who specialise in coconut oil-making plant to say what they think best, not too much or too little, for the interests of themselves and their customers-to-be.

If the author or anyone else imagines that we sound ungrateful for stressing this point, they must not run away with such ideas. The fault, or rather the cause of any disappointment, comes from one or two directions, viz., either no really useful improvement or invention in the shape of bulk coconut-oil machinery has been put upon the market since 1914, when the first edition of this book appeared, or else some one or two makers have got such rattling good machines they do not wish to discuss them in print. Study the conclusions of all three editions (they are on the desk as these words are being written), and say if you think we have been too emphatic on the matter. Americans have always had the name of being the greatest believers in publicity in the world. We know of only two makers of oil machinery across the Herring Pond, in spite of our

forty years' outlook across the world. What about all the others? Also how many first-class engineers are there in this country who specialize in up-to-date machinery to treat coconut or palm-oil?

* * *

Those interested in the production and sale of fertilizers for coconut land should note the concluding paragraph of Chapter II of Copeland's third edition of "The Coconut." Under the heading of "Climate and Soil," this authority points out that: "When chemical analysis is used as a guide to the prospective use of fertilizers, it should be remembered that the best natural conditions are likely to be those under which the profitable use of fertilizers is most difficult. For the moving water in the soil, which brings to the trees a natural supply of food, will likewise tend to carry away from them the food which may be artificially applied about their roots."

Referring to the concluding remarks of the above review, Messrs. Rose, Downs and Thompson, Ltd., write us from Hull: "We are, of course, particularly concerned about the question of the manufacture of coconut oil. There is certainly no reason why the subject of coconut oil extraction and the machinery therefor should not be fully discussed and dealt with in the book, even to the extent of a 20-page chapter as suggested. We are at a loss to know on what grounds the author bases his conclusion that no advance of any importance has been made in recent years in the extraction of coconut oil, neither is there any reason for thinking that we as makers are not willing to discuss our machinery in print."

"We might call your attention to our recent advertisements in TROPICAL LIFE, where we mention that we have quite recently supplied no less than six important installations for coconut oil extraction. Several of these have signified the inception of the industry in entirely new localities, and in several cases we have supplied complete mills for the extraction of the oil, together with modern refining equipment for the production of edible, deodorized oil, and also plant for the manufacture of compound lard therefrom."

"We can supply the most efficient and up-to-date plant for the purpose, and it may be noted as an indication that whilst a few years ago any process of extracting coconut oil called for at least two operations, we can now give a highly satisfactory yield of oil with a single pressing, a fact which is also stressed in our advertisements. In our latest presses, upwards of 60% of oil can be extracted from copra of ordinary good quality by one operation, and in fact one of our customers claims he has extracted 64% with one pressing, leaving 5% of oil in the cake."

"Hydraulic presses, expellers and solvent plant, all of which are included in our range of products, have their places amongst the plant which can be used, and the selection of the most suitable equipment in any particular case can safely be left to our guidance as experts. If the second edition of the book under review appeared in 1921, we can claim at least a dozen improvements and some completely new ideas since then."

THE BIRDS OF TROPICAL WEST AFRICA. By David Armitage Bannerman, M.A., F.R.S.E., to be published in Five Vols. Vol. I Crown 4to, lxxvi + 376 pages. Price 22s. 6d. Vol. II 4to, xxix + 428 pages. Price 22s. 6d. net. Postage, Inland 1s., Foreign 1s. 6d. each volume. Published by the Crown Agents for the Colonies, 4, Millbank, Westminster, S.W.1.

The second volume of this classic has now made its appearance. It is worthy of the first volume and of the work generally in every respect. The author is attached to the Zoological Department of the Natural History Section of the British Museum and a member of several societies interested in travel and bird life. One is not surprised, therefore, at the quality of the contents of both volumes, or at the details given of the anatomy and plumage of the birds. Those who, like the writer, have been engaged in the handling of tropical birdskins and feathers for trade purposes, will be the first to call attention to the descriptions and variations. All this means much work; so far it has all been well done; one feels sure that the quality will be maintained to the end.

The studies refer specially to the birds of the Gambia, Sierra Leone, the Gold Coast and Nigeria, but birds, like airmen, often refuse to be tied down to any one locality. As an instance of this we are told that practically all of the Wading Birds and many species in other groups discussed, range as far as the East African Dependencies. We seem to have met many of the birds—the small parrots especially—in the West Indies, at any rate those we know are very much like those illustrated. *Lorito* or *Lorita* they are called, being the diminutive of *Loro*, a parrot in Spanish. These little birds become well known, as many of the *marchandes*, or the cooks, when marketing in the streets have one standing on their heads or somewhere around. There is much we should imagine, therefore to create a well spread-out demand for such a work in East Africa and many other tropical centres. The author himself confirms this by saying that his descriptions cover a much wider area than the four West African Colonies named, for he practically reaches to the Senegal River on the north, to the Congo down south, whilst eastward longitude 20° E. is touched and the recently explored

mountains included. On the west the mainland is left behind and all those islands or island-groups that lie off the mainland are included from Cape Verde to the Gulf of Guinea. Here some remarkable bird life is included. It is a big job, being carried on by a big worker. Certainly it will repay all the work and knowledge put into it; would that we all had such application and knowledge.

In the first volume 164 birds are discussed, of which 129 certainly go right across to East Africa. The second volume tackles another 185 birds including pigeons, parrots, wading birds.

In conclusion a word of praise must be given to the artists who are illustrating the work. These include the most celebrated bird artists of the day, George Lodge, H. Grönvold and the late Henry Jones, whilst the half-tone and line drawings are from the pens of Grönvold, Frohawk, Roland Green and others. Mr. Roland Green, we understand, has contributed the majority of the drawings of the Wading Birds, upon which group he is an acknowledged authority.

We need not say how perfectly all these drawings have been reproduced, as our publishers, Messrs. Bale, Sons & Danielsson, Ltd., are responsible for the plates.

Everybody who had the pleasure of meeting Sir Maurice de Bunsen and especially those who have worked with or been trained and advised by him, must feel sad to know that he is no more. Would that the idea of the Lone Trail were a reality and men and women "of a feather" and equality could travel along it in company even if speech were impossible. Were this to be so, what a goodly company would a man like de Bunsen be welcomed among. Most of us to-day have got in the habit of associating him with those who speak the Spanish tongue, although in 1918 he visited Brazil as well as the Spanish Republics, but his real work and what made him of such marked value to his country was when he became our Ambassador at Vienna, after seeing service in one position or another in Tokyo and Siam, in Constantinople and Paris, with the Ministership at Lisbon in 1905, and at Madrid from 1906-1913. What a linguist he was, as well as being so courteous, and generally likeable. His despatches from Vienna will make history; they could give clever novelists a hundred plots to work on, and now he is no more. One thing, no one can say that his glory will pass with him, for it will not, any more than will the usefulness of his work ever since he first entered the Diplomatic Service in 1877.

The possibility of establishing, or rather of re-establishing, a banana-plantation industry in West Africa, especially in the Gold Coast Colony, was stressed by Mr. W. G. Freeman, formerly Director of Agriculture in Trinidad, West Indies,

in the paper he read at the Royal Society of Arts on "The Empire Fruit Industry," with Sir William Furse, Director of the Imperial Institute (to which Mr. Freeman is not attached), in the chair. Those working to make a success of British West Africa as a banana-producing centre must look out for the Society's *Journal* towards the end of March, when the paper and the debate which followed should appear. Mr. Walter, of the Horace Plunket Foundation (10, Doughty Street, W.C.1), who is working so hard to organise the selling of tropical crops, made some noteworthy remarks on the subject. Every planter, if not every merchant, will be interested in what he said.

(Continued from p. 50).

to the College of Forestry. After a spell of always useful and, at times, distinguished service, Mr. Robertson retired from the I.F.S. last year and not long after was appointed by the Government Council of the Empire Forestry Association to step into Mr. Story's shoes as editor of their journal and, as such, promises to carry on the reputation of that organ as a useful ally to the good work of the Association in which the Prince of Wales, we believe, takes a close personal interest. Widely travelled (an account of his ascent of Kilimanjaro Mountain would please our contemporary, *East Africa*) and keen on the development of a trade in forest products, the Association is lucky in securing the help of so well-trained and experienced an editor to carry on with.

Discussing the question of the marketing of Empire timber and forest products, we would claim, speaking off our own bat, that the future success of this, so far, undeveloped industry lies entirely in the ability of those interested in the matter to break down the deep-rooted prejudice of everyone when asked to try new "wares," and slowly but perseveringly to build up on those unwilling foundations the basis of a permanent (so far as possible) all-British market as the years go by. It is claimed that in forty or fifty years' time the work already started on the production side will place some 60,000,000 feet of Empire-grown soft woods alone on the market. Were only 6,000,000 feet to make their appearance to-day, who would buy them against present supplies, mainly Russian, at under cost price at the moment? Yet these large quantities are expected in time, so we must all get busy and find the market for them as well as for the tropical timbers which the Empire produces without rival. Time passes quickly. What will Russia be doing half a century hence? How will her prices then compare with timber produced by "decent" means? At the moment we are assured that, whatever the state of their hewers of wood may be, the Russian Forest Service is perfect, some claim that it is the most perfect in the world. Is this so?



"Tropical Life" Friend.
No. 321.

MR. W. A. ROBERTSON, F.R.G.S.,

Editor of the "Empire Forestry Journal"

If there are any of our readers, at any rate those within the Empire, who do not know of the Empire Forestry Association in London, it is fully time that they should both learn of its existence as well as something of those who are responsible for its birth and well-being. They should also know of others who are, through collaboration with Forestry Officers, &c., overseas, doing so much to maintain our forest areas abroad, to safeguard the rainfalls and water supplies to the land as well as to teach those on the spot how to utilise the timber and other products to the best advantage of themselves and also, incidentally, of the local exchequers and of the buyers of the wood and products overseas. In a word, the Association works to keep the forest areas "alive and well," so as to, among other things, maintain sustained regular returns from them in one shape or another.

Discussing the past, present and possible future of the Association, its aims and ideals, "Our Friend" was telling us of the great work Mr. Fraser Story has been doing as Hon. Editor of their journal, and of his work on the Publications Committee until, with his duties on the Forestry Commission and in other ways, it was considered to be laying too heavy a load on his shoulders and so he was persuaded to retire from the editorship and let Mr. Robertson take his place, knowing that with his long experience in Indian forestry work his successor would fully maintain the high reputation of the various publications.

"Mr. Story," "Our Friend" told us, whilst looking across from their new offices at Grand Buildings, Trafalgar Square, towards Canada House, "was originally Professor of Forestry at Bangor and adviser to the Ministry of Agriculture. He served on the Royal Commission of

Coast Erosion and Forestry, and during the War was connected with the Timber Supply Department." Of himself and his work in India Mr. Robertson had nothing to say, but we know of him as having been among the last of the students who studied at "Cooper's Hill" for the Indian Forestry Service, for he left there in 1906 just before that establishment was given up. "Cooper's Hill," situated near Egham in Surrey, it may be remembered by some, used to be the property of Baron Grant, and when his effects were sold the Indian Government purchased this portion of the Baron's assets and used it to train officers for engineering, forestry and other work in India. As time went on, Oxford, Cambridge, the Scottish and Welsh centres offered similar facilities, and so Cooper's Hill was given up. High up, it looked across Runnymede and one of the most attractive views of the Thames in a way, one imagines, which only rendered work possible by turning your back fair and square to the river lest the sight of the meadows made your thoughts turn once more to the host of Barons forcing King John to sign the Great Charter confirming the national liberties in 1215, and thus caused you to neglect your studies.

As regards the Empire Forestry Association, this was established in 1921 and owes its origin to a resolution passed by the Empire Forestry Conference. It is not an official body although it has H.M. The King as Patron, the Prince of Wales as President and Sir Peter Clutterbuck as Chairman. The E.F.A. is a voluntary association of foresters as well as of those who are interested in any way in forestry and the products of the forest. The annual Handbook costing 3s. 6d. (probably post free) should be studied by every estate owner, the same as their journal which appears twice a year. Both have much in them to help those who need wind breaks and who are anxious to utilise their forest or wooded areas to best advantage. The fees for membership are not heavy and include receipt of the handbook and journal free. The work carried out at the various centres includes every branch of tree and forestry work, as surveying, entomology, mycology and, of course, management and utilisation. They include, in some cases, such technical matters as identification, seasoning, preserving, &c. With members and connections throughout the Empire, there are few, if any, spots to which the work of the members of E.F.A. does not reach.

Coming to "Our Friend" himself, he was born in 1885, and after leaving Cooper's Hill was appointed to the Forest Service in Burma and arrived there in October, 1906. Here he worked as assistant conservator until 1911, when he was promoted to deputy conservator and became officiating conservator in 1925, and full conservator the next year. In 1918 he was instructor

(Concluded on p. 49).

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If you wish to get prompt attention from Advertisers you must mention "Tropical Life" when writing or seeing them.

London Timber Market in 1931.

MESSRS. C. LEARY & Co.'s Annual Review of the Hardwood and Plywood Market during 1931 deserves every attention on the part of our readers, especially those interested in mahogany and tropical woods. Closely printed on foolscap size paper, it has much to tell us and tells it well. In the opening paragraph, after discussing the depression everywhere and the upset caused by this country going off the gold standard, we are then told: "After the first effects of the disturbance caused by the exchange situation had worn off, confidence began to grow and stagnant markets became more active, particularly in regard to landed stocks and imports from countries which had also gone off gold. Although this better demand had somewhat improved prices in terms of sterling, the increase generally is not sufficient to offset the

feet, Sapele 244,000 feet, Grand Bassam 229,000 feet, Assinee 163,000 feet (19,000 feet round), Secondee 101,000 feet, Sundry Ports 66,000 feet.

As against 1930 the comparison is: Gaboon 39 per cent. less, Lagos 38 per cent. less, Benin 41 per cent. less, Grand Lahou 46 per cent. less, Sapele 21 per cent. more, Assinee 43 per cent. less, Grand Bassam 17 per cent. less, Secondee 39 per cent. less, Sundry Ports 35 per cent. more; Halft Assinee was not imported.

As will be seen from the above figures, the import of each description, with the exceptions of arrivals from Sapele and "Sundry Ports," show a decrease on last year's figures. Gaboon has been in little request, and low-grade logs have been difficult of sale, even at quite nominal figures. Of the other descriptions, Nigerian has

SALES AND IMPORTS INTO UNITED KINGDOM DURING 1925—1931.

AFRICAN MAHOGANY	1931 FEET	1930 FEET	1929 FEET	1928 FEET	1927 FEET	1926 FEET	1925 FEET
Imports	2,838,000	4,848,000	5,567,000	7,286,000	6,226,000	8,465,000	12,713,000
Sales	3,440,000	4,041,000	5,581,000	7,553,000	6,402,000	9,791,000	11,221,000

full difference in exchange and the principal benefit to shippers was the opportunity of realising some of the stocks which had been hanging fire, in some cases for a considerable time. For such the prices eventually obtained were probably no worse than had the goods been forced off whilst the £ was still on a gold basis. The effect of the exchange crisis has been to foster the sale of Empire timbers which the 'Buy British' campaign had helped, though this additional impetus was very welcome. It is to be hoped that British shippers will do their part to make the most of the opportunity presented and thus establish Empire supplies on a firm and lasting basis."

With regard to mahogany, we are told that until the autumn it looked as if last year was going to be the worst of five consecutive bad years. Only seven auction sales had been held up to the end of September, the import during this period being exceptionally light, despite which values were weak. In the last three auctions held during October and December, however, a welcome improvement was shown, but both imports and sales establish low records for post-war years. Values on a sterling basis at the close of the year show little change compared with those of last December. On a gold basis, where this applies, they are, of course, lower. Stocks to be carried forward, at 1,308,000 feet for all kinds, show a decrease of about 22 per cent. compared with 1930.

The imports shown above consist of the following: Gaboon 673,000 feet, Lagos 614,000 feet, Benin 484,000 feet, Grand Lahou 264,000

been the most popular, and in the auctions held during October and December appreciably improved values were obtained. The limited supplies of Lagos and Benin wood have sufficed for the requirements of the market, so that Ivory Coast wood has been rather slow of sale. The fall in value of the pound sterling makes it appear probable that imports of Ivory Coast logs will be still further restricted.

The stock to be carried forward to 1932 is 373,000 feet (last year 931,000 feet), composed as follows: Grand Bassam 110,000 feet, Lagos 109,000 feet, Secondee 79,000 feet, Gaboon 39,000 feet, Grand Lahou 12,000 feet, Sapele 5,000 feet, Sundry Ports 19,000 feet.

We have received from the Secretary of the Royal Society of Arts particulars of the 1932 Competition of Industrial Designs, viz., the ninth annual open Competition of Industrial Designs to be held at the Imperial College of Science and Technology, Imperial Institute Road, South Kensington, London, S.W.7, in June next. Intending competitors must apply to the Secretary, R.S.A., John Street, Adelphi, W.C.2, for further particulars and also—between May 2 and 9—for the necessary entry forms. The last day for receiving entries is May 21. In all prizes and scholarships amounting to about £1,400 will be offered. The sections include fabrics, interior decorations, silverware, window-dressing, architectural ornamentation, furniture designing, book work, advertising and commercial art.

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Non-receipt of Copies must be notified to the Manager at Great Titchfield Street, and NOT to 5, Gt. Tower St.

All letters should be addressed to the Manager, "Tropical Life," Oxford House, Great Titchfield Street, London, W.1.—Telephone :—Museum 2077.

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"Copy" must be sent in not later than the 13th of the month preceding the month of publication. For display advertisements it can be changed every month, if desired, without extra charge. The Publishers claim the right to refuse any advertisement or the lay-out of one. (If it tends to be unfair to other firms.)

All communications relative to Advertisers' Announcements must be addressed to the Advertisement Department, "Tropical Life," Oxford House, Great Titchfield Street, London, W.1. Telephone :—Museum 2077.

Tropical Life.

MARCH, 1932.

Sisal Restriction.

When will it Come?

THOSE who have been watching the success of the "Stripper" or Combine machine and are taking note of the increased output of the complete machine, whilst the orders for reapers and threshers fall in proportion in the United States and other countries which produce cereals over areas of vast extent, must feel anxious for the future of our sisal producing industry and often ask what the future holds in its closed hand even for those who are awake to the position. In face of this, those who wish to go on increasing the production of the fibre will no doubt deserve what they get, for, whatever their deserts, the share will be liberal whether it be to the planters' advantage or otherwise.

Even if there were no such agricultural machine as this "Combine," to reap, i.e., strip off the ears only of the wheat (leaving the straw standing until it is ploughed under and so give to the soil a goodly proportion of the salts, mineral and other plant foods that the crop would otherwise remove), if the price of sisal continues to hang round its present level, with a wish to go lower rather than higher, a halt must be called if any life is to be left in the industry, taking the world as a whole. With the Combine increasing in hundreds, if not in thousands, every year, it will be more than suicidal were the recent attempt to come to some sort of an agreement to regulate sisal prices, production and increased uses, allowed to disappear in smoke; no one can be more anxious than this paper is to see the British producers of sisal make a success of their ventures, whether it be by turning out 100 per cent. sisal or, if breakers appear ahead, by turning to other crops as well. "Nothing pays to produce in these days," ninety-nine people out of a hundred will tell you, but they are talking of crops like sugar, coffee, tea, cotton, &c., that have no serious trouble ahead, but are suffering from the after-effects of the war, which taught us to go without such necessities to a considerable extent. Again, the war, by giving many young people an income they had never expected caused them to spend the money, waste it in the main, in other ways for other articles. One hopes, in these cases, wisdom will return to the public mind and the money now being wasted on cinemas, beauty specialists and specialities, smoking, drinking, &c., will go back to the more homely articles. With sisal the position is entirely different, that which was no bigger than a man's hand, is now a cloud hanging low and threateningly over the sisal estates. Deny this if you can, and if you cannot, then get together, all of you and draw up a fair and square deal to cut down supplies at the shortest possible notice

should it be necessary to do so, every attention being given to each centre's ability to raise crops other than sisal to make two ends meet until sisal comes into its own again, as rubber and sugar in particular will do, we hope, some day.

But, when an agreement is arrived at, do let it be a fair one; do not cause the biggest producer to cut off more than his share, and do not, as with the United States and Cuba over sugar, tolerate for one moment any defaulting or not "sticking to the bargains" agreed to by all. British Agreements are not scraps of paper, and if Cuba, which could produce 6,000,000 tons of sugar, is satisfied to let America cut her down to 2,180,000 tons, we do not want anything of the sort to happen over sisal. Being Mexico, Java and this country mainly, such things, we feel, will not occur. Feeling sure of that, let a start be made at once to ascertain what the future holds for us with regard to binder twine orders and then what the present and near future is likely to give us in the way of prices. Such data ascertained, an agreement can then be drawn up allotting to each producing centre its quota or proportion of the year's total crop. What that total crop is to be must in turn be arranged each year after the horizon has been carefully scanned by a joint committee of experts able to obtain reliable information as to how every competitive grower of the fibre or check on the sales of sisal is likely to behave so as to hurt or assist the production and marketing of the fibre for twelve months ahead.

Potash Production in America.

OUR European friends interested in the production, in the sale, and, perhaps, especially in the utilization of potash, either alone or made up with other ingredients for the fertilizer trade, should note the following extract from the twenty-fourth ordinary general meeting of Borax Consolidated, Ltd., when the Chairman, the Earl of Leven, told the shareholders as follows regarding the companies interested in potash for fertilizer and other purposes. We are quoting from the report in *The Times*:—

"I explained to you at our last meeting why there is a close association now between our main product, borax, and potash owing to the joint production of these products by others and the necessity for us for our own protection to enlarge the field of our operations by an interest in the production of potash, either by developing our brine property at Searles Lake or otherwise, and that we had acquired a substantial interest in the new potash field in New Mexico in the United States. The United States Potash Company possessing that property has been vigorously developing the mine, has railroad communication established by a branch to the line of the Santa Fé Railroad, and has constructed its own narrow-

gauge line of nearly 17 miles between the mine and the works site. A contract has been arranged for the construction of the first unit of the refinery, which by the middle of this year should commence refining operations. In the meantime, the potash company has entered into contracts with some of the large fertilizer companies for the supply of the potash direct from the mine, and has already supplied a very considerable tonnage.

Scope for Development.

"It takes time to develop an undertaking as important as this, and we cannot anticipate immediate results so far as our investment is concerned, but there is a very large field open, as the demand for potash for fertilizer purposes alone is very large, and, although this has been temporarily affected, like most other products, by the present conditions, the growth in the world's demand must largely increase in the immediate future, and the company in which we have made our investment will, owing to its exceptional advantages, enjoy a share of this, and in consequence we may anticipate a very satisfactory return on our investment.

"We have through our associated American company given the Potash company every possible assistance, financial and technical, to help develop the property without delay, and I am glad to say we have been able to be of considerable help in the present difficult conditions, when permanent finance is almost impossible to arrange for any industrial enterprise, unless upon conditions which are too onerous and entail a sacrifice of equity. Then again, we are in complete harmony with the group which initiated this very important development in the potash industry."

Congratulations are due to and being received by Mr. Barrow Cadbury, the chairman of the big firm of cocoa manufacturers, on the completion of fifty years' service with the firm, and to Messrs. Cadbury Bros., Ltd., on having had one who for so long has been able and willing, first to assist and then to guide the fortunes of this giant firm. Fairy tales often tilt at the idea of men moving mountains, but with Mr. Barrow Cadbury surely we have a clear case of a man who moves or has caused to be moved many mountains, first of raw materials and then of the manufactured article, to say nothing of keeping the firm and its thousands of employés, travellers, etc., ever on the move and always in a forward direction. The eldest son of Mr. Richard Cadbury, Mr. Barrow started with the firm in 1882, and those who know him must agree that something—his disposition, the atmosphere of Bournville or the aroma of the Food of the Gods—has kept him fit and free from illness to a wonderful degree. Long may he remain so.

MARKET REPORTS, GOSSIP AND PRICES.

Watch Politicians if you Want to Catch the Boom in Trade.

SELLERS of produce, be they ever so far back from the coast, must in these days subscribe to at least one weekly paper in order to see the trend of events in America, in Germany and elsewhere, and to watch what happens politically and financially in those countries which are buyers of tropical crops from themselves or others. Such a thing is necessary as, following on the long run of stagnation and suspicion of everyone and everything, there are signs that the public expect much more life to come into all markets, and when the public do develop these ideas it takes a lot to discourage their enthusiasm. What sellers of commodities have to watch in particular is the extent to which the banks and politicians in the various countries wish to encourage or discourage the idea that money will become more accessible given reasonable security, and that everyone, so long as their two feet are on the ground, and not soaring in the air of Wild Dreams, can be fairly certain of help, financially and otherwise.

Take Germany, for instance, and realise what it will mean if von Hindenburg (the Field-Marshal has become enough of a classic for us to leave out all titles) is or is not elected. Turn to America and think what it will mean if the Hooverites do not win at their next election. Face India and watch how quiet and better trade will come if the hand inside the velvet glove can hit hard if needs be as well as smooth matters out if the Gandhi and other "ists" will give us the cause of doing one or the other. Then you have Japan and China with the Russian Bear in the background. Has anyone, or will anyone, catch sight of his claws as well as seeing his huge unwieldy frame sitting up and watching the others fight?

The wages, and through that the purchasing power of a country, also need watching. Can it be claimed that both the U.S.A. and the U.K. are paying Labour on too high a level to those in employment and thus causing millions to go without money at all, whereas if they averaged down the pay of the lucky ones all might get a bite. One cannot help feeling at times that those who have work have hidden themselves behind unfair rules that cause the others to go without. "All or none" is their slogan. Why should the nations adversely affected by such a Labour policy agree to such a thing?

Is Germany trying to play more fairly towards all her workers? One feels that she is if the Emergency Decree of December 8, now reported to be completed, works out in practice as it reads on paper. The pay of those who received anything at all was on too high a basis and so, as far as one can make out, the pay of 1930, about 107 fgs. or just over 1s. per hour, is to be reduced

by one-fifth or 20 per cent., to about 80 fgs., against 87 fgs. in 1927 and 72.5 fgs. in 1925. Are these the facts? Now, it may be argued, if you pay less (money) the worker, man or woman, must buy less; this may be true in individual cases but not in the aggregate, and we would argue that if you pay more workers, the country, taken as a whole, is likely to attract more orders, and that means the spending capacity of all those countries who arrange to give everyone some wages and little or no doles will, most likely, prove to be the best customers of tropical products in the end if only because they, in their turn, can sell more to those tropical markets.

As these notes are being written, the Socialists and Radicals in France are reported to be jubilant at the fall of M. Laval and his Government, hoping, no doubt, that the new elections will give them—the extremists—a chance to come up top. On the other hand, the more Conservative element in England has scored a 451 to 73 victory on the second reading of the Tariff Bill, and so believe much more work will result for the labour forces in this country, whilst returns from Germany show a drop of 23 per cent. in her exports, meaning fewer orders for her factories. Thus does, and thus will, the pendulum of trade swing, and as it goes against increased money-making on the part of the countries importing tropical produce, producers and shippers at those centres must try and secure orders from distributing centres which feed areas where employment shows signs of increasing and not decreasing. This means much careful watching and trouble, but it will pay in the end, especially if there is any truth at all in the claim that trade in America and this country should show signs of improving in the near future.

Turning to Spain as a market for tropical products, one can only hope that she will settle down soon. The idea that the Spanish King by abdicating would avoid bloodshed and social upheaval has by no means had that effect. Elsewhere where the "untutored mind" is striving to upset law and order, not having the brains and will to realise how their actions can only bring disaster on everyone, the agitators included, we should look to Spain as an example of how, like troublesome boys in a family or school, it is far better at times to be cruel only to be kind in the end.

Moving on to our usual market gossip, we will start with:—

Rubber.

This article at the moment is certainly not suffering from over-advertisement in the market reports and gossip. Surely this is a mistake; if

trade is bad do not make it worse by leading outsiders to imagine rubber is dead. Those in the know can think what they like and know what is true, but surely it is a mistake to stop publicity about a product in order to keep it before the public. If we are wrong in urging this, then the whole idea of general or impersonal advertising is a mistake. Products, proprietary articles in particular, are boosted to the skies, not because the public know what they are or why they are offered for sale, and rubber can well be included alongside these other goods. With the work done by the R.G.A. it should be easy to boost rubber. "See that your railway or steamship company uses more rubber." "Write to the Secretary of the Get-there-quick Air Route to work in more rubber to soften descents and to make the going more comfortable." "Ask your furniture dealers to stock rubber chairs, &c., now that it is known how well they wear." Who is doing anything of the sort? Yet there are dozens of articles in every house, factory, or in railway and other fittings that can now be made of rubber with advantage and are not. Why is it? The reason is partly due to lack of knowledge on the part of the public (how can they know if no one tells them?) and partly because, when they do know, they do not ask for the new goods. New uses for rubber have been put forward, write Messrs. S. Figgis and Co. in their annual report, but they have not come to fruition, although there are many hopeful experiments. Ascertain, therefore, what goods and fittings in these days are made of rubber and then (if prices are reasonable, as they should be with the raw material at its present value) refuse to be happy until you are supplied with what you call for. According to the above report, about 770,000 tons of plantation rubber were produced last year, exclusive of about 5,000 tons shipped in latex form and, of course, any rubber from S. America. In 1930 the total was put at 796,500 tons, against 833,000 in 1929. Consumption for all countries is put at 669,000 tons, against 702,000 in 1930 and 795,000 tons in 1929. Last year America took 349,000 tons, against 376,000 in 1930 and 470,000 in 1929, so it is easy to see how small in proportion to their populations the demand from other countries has been.

Coming to later news, Messrs. Lloyd, Matheson and Carritt report that the London market has been very quiet of late. During January, America imported only 31,298 tons, against 51,931 tons in December and 37,098 tons in January, 1931. Her stock and afloats at the end of January stood at 400,094 tons, against 376,765 at the end of last year and 265,670 tons on January 31, 1931. With regard to values, these rule as under:—

SPOT QUOTATIONS—	1932	1932	1932	1931
	FEB. 17TH	FEB. 10TH	FEB. 3RD	FEB. 18TH
	s. d.	s. d.	s. d.	s. d.
Smoked sheet (F.A.Q.)	0 2 $\frac{1}{8}$	0 2 $\frac{3}{4}$	0 2 $\frac{3}{4}$	0 3 $\frac{3}{4}$
Crepe (F.A.Q.)	0 3 $\frac{1}{8}$	0 3 $\frac{1}{8}$	0 3 $\frac{1}{8}$	0 4 $\frac{1}{4}$

FORWARD POSITIONS—	FEB. 17TH		FEB. 10TH	
	SMOKED SHEET	CREPE	SMOKED SHEET	CREPE
	s. d.	s. d.	s. d.	s. d.
1932, February	0 2 $\frac{5}{8}$	0 3 $\frac{1}{8}$	0 2 $\frac{3}{4}$	0 3 $\frac{3}{8}$
March	0 2 $\frac{1}{2}$	0 3 $\frac{1}{8}$	0 2 $\frac{3}{4}$	0 3 $\frac{3}{8}$
April/June	0 2 $\frac{3}{4}$	0 3 $\frac{3}{8}$	0 2 $\frac{7}{8}$	0 3 $\frac{1}{4}$
July/September	0 2 $\frac{7}{8}$	0 3 $\frac{1}{4}$	0 3	0 3 $\frac{3}{8}$
October/December	0 3 $\frac{1}{8}$	0 3 $\frac{7}{8}$	0 3 $\frac{1}{8}$	0 3 $\frac{1}{2}$
STOCK—				
	1932		1931	
	TONS		TONS	
London, Week ending, Feb. 13th	67,824		81,432	
Liverpool, " "	59,874		43,679	
Total	127,698		125,111	

SINGAPORE QUOTATIONS—

Feb. 17th.—Spot, 8 $\frac{1}{2}$ cents, April/June, 1932, 8 $\frac{5}{8}$ cents; July/September, 1932, 9 $\frac{1}{8}$ cents.

Feb. 10th.—Spot, 9 $\frac{1}{2}$ cents, April/June, 1932, 9 $\frac{5}{8}$ cents; July/September, 1932, 10 $\frac{1}{8}$ cents.

Balata.

This market continues to be quiet. On the spot West Indian sheet is worth 1s. 8d. against 1s. 7d. c.i.f., with sellers over at that. Venezuelan block on the spot is quoted at 10 $\frac{1}{2}$ d. with Iquitos and Panama at quite nominal values.

Cotton.

Manchester, on February 19, spoke of consumers again coming for supplies so that a fairly active market resulted and the tone generally was brighter, with a slight additional spurt given to business owing to the fall in the Bank Rate. It is hoped that the textile section of the British Industries Fair will immediately, and then permanently, benefit the cotton industry. Eight halls at the White City, as we have seen, are used for textiles and five hundred buyers at a time can have a clear view of the most beautiful dresses imaginable. Such a display must put life into the demand for the fabrics and their raw material, viz., cotton.

Later news spoke of the stronger tone continuing. This is partly on account of (says *Cotton* of Manchester) the financial measures taken by the U.S. Government to assist the banks and increase credit facilities. "Had it not been," the report goes on to say, "for the persistent selling by the Co-operative Associations in the South and the belief that with the approach of the planting season there will be increased southern offerings, the advance in prices would probably have been more pronounced." Returns show that the world's consumption of all growths of cotton in the *first half* of the present season amounted to 11,475,000 bales, compared with 10,939,000 bales for the same period in the last season. Here we have, therefore, an increase over the whole world of 500,000 bales during a period when the raw material has been "almost given away" and populations have steadily increased. It only shows how artificial silk has eaten, and will eat, into the trade of cotton fabrics. The low price—to the farmers but not

to the consumers—of cereals, flour, &c., prevents the areas now under cotton being diverted to other crops, as might and should be the case. This season again, the yield per acre in the southern States of America is spoken of as running high, some say 200·1 lb. per acre, against only 147·7 lb. last season. Can such a report be true?

Moving on to prices, the following were the official "Spot" prices in Liverpool on February 19 and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5·95*	5·59*	6·12*	8·57*	6·91†
Strict Middling American	6·00*	5·64*	6·27*	8·92*	7·01‡
Fair Pernam	6·00	5·64	6·27	8·27	7·39
F.G.F. Sakel. Egyptian	7·70	7·45	9·85	13·55	9·90§
Fine Broach	5·80	5·41	4·99	6·40	6·5
Fine No. 1 Oomra	5·61	5·26	4·54	6·00	6·5
Fine Bengal	5·16	4·91	4·29	4·75	5·7

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Vegetable Oils (London and Liverpool).

Liverpool speaks of Palm Oil as being firmer with Lagos at £21 2s. 6d. for Softs for February-March and £20 12s. 6d. for Mediums, against £20 7s. 6d. for Red Sherbro. With Cake, there is no pressure to sell Linseed and will not be until holders know exactly where the new Tariff-to-be will land them. London made is worth £8 5s. to £8 10s. and foreign imported about 20s. less. Cotton cake has been ruling at £4 6s. 3d. to £5 5s. Tariff uncertainties must be affecting all cakes.

Moving on to other products, we come to the usual table in which readers should note the considerably higher prices on February 20 by comparing the present values with those in the February and preceding issues:—

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
Feb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20	19 15 0	18 2 6	18 0 0	17 7 6	17 2 0
17	18 15 0	17 5 0	17 2 6	16 7 6	16 5 0
13	18 15 0	17 5 0	17 2 6	16 7 6	16 5 0
10	18 5 0	16 0 0	15 17 6	15 5 0	15 2 6
6	18 5 0	16 0·0	15 17 6	15 5 0	15 2 6

Malabar copra, f.m.g.w.s. £ N/Q. Rabaul Plantation f.m.s. £17 5s. on Feb. 20th.

COCONUT OIL PER TON.

Ceylon mill oil on Feb. 20th was quoted at £29 15s for spot parcels against £30 (cylinders) for shipment. English deodorized in barls. is worth £36 10s.

OTHER OILS PER TON.

	COTTONSEED				SOYA BEAN	PALM
	CASTOR FIRSTS	GROUNDNUT CRUDE*	CRUDE EGYPT	LINSEED SPOT†	SPOT, NAKED	KERNEL OIL‡
Feb.	£ s.	£ s.	£ s.	£ s. d.	£ s. d.	£ s.
20	42 10	38 10	24 0	16 10 0	25 0 0	27 0
17	40 10	33 10	24 0	15 15 0	24 10 0	27 0
13	40 10	33 10	24 10	15 15 0	24 10 0	26 0
10	40 10	33 0	24 0	15 15 0	24 10 0	25 0
6	40 10	33 0	24 0	15 15 0	24 10 0	25 0

Soya Bean Oil. Oriental to the Continent for Feb.-March is quoted £21 5s. in barls.

* Crude, naked. † Net, naked, ex-mill. ‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL)		COTTONSEED		CASTOR		GROUND-		SOYA BEAN	
	CALCUTTA	LA PLATA	EGYPT	BLACK	BOMBAY	NUTS	MANCH	AFLOAT		
Feb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20	12 0 0	N/Q	7 5 0	15 0 0	19 0 0	8 1 3				
17	11 15 0	8 15 0	6 18 9	13 15 0	17 10 0	7 16 0				
13	11 10 0	8 12 6	6 12 6	13 5 0	16 17 6	7 15 0				
10	11 7 6	8 13 9	6 13 9	13 0 0	16 3 9	7 10 0				
6	11 7 6	8 12 6	6 16 3	12 15 0	16 2 6	7 11 3				

Desiccated Coconut.

Reports speak of this market as being firmer, with Fine on the spot at 31s. 6d. and Medium 33s., whilst afloat Medium is worth 30s. 6d. to 31s. for near shipment with buyers of March-April at 29s. c.i.f.

Coffee.

We have had a most interesting letter from a coffee planter in the F.M.S. which we perused greedily line by line until we came to the postscript, which should have been the *bonne bouche* but rather partook of an emetic, as all our visions of "excellent copy" went in those three words "Not for Publication." There seems, however, good prospects for coffee over there if . . . (this, that and the other were not done in some cases or were done in others). Perhaps things are not really so bad as they look, for one piece of information showed our correspondent to be over-pessimistic when he tells us that "There are no up-to-date books of reference on coffee applicable to this area. To apply the literature of other centres is difficult for beginners." Naturally, we told him of McDonald's book on "Coffee," and urged him to see if much that is said there cannot be absorbed and turned to use by coffee planters in Malaya. In our opinion Malaya should do well for coffee if only for local consumption, for one writer claimed that they "imported a tremendous quantity annually, mostly from the Dutch East Indies, but . . .," and here, no doubt, is the cause of the "Roasting" in the letter referred to earlier in this paragraph.

Meanwhile, we have copies of "Kenya and its Coffee," by H. F. Bargeman of Nairobi, and the following list of Reports and Bulletins from Southern India which might suit Malaya even if Kenya's views and experiences are wanting in some details. Acknowledgments and a review of the following are long overdue, but at least let us jot down the names and particulars here:—

(1) The Improvement of Coffee in the Dutch East Indies, by Leslie C. Coleman, M.A., Ph.D., Director of Agriculture in Mysore, being Bulletin No. 15 of 1931 of the Department of Agriculture, Bangalore, Mysore State. The same as Dr. Coleman's account of Sugar in Java, this is a really wonderful report with plenty of illustrations. Can one claim that if Malaya drinks (and, we take it, likes) D.E.I. coffee that this report should help them? No price seems to be mentioned. There are 17 pages, exclusive of the many illustrations.

Bulletin No. 16. Dr. Coleman's Report on the Coffee Berry Borer—old friend *Stephanoderes*—in Java. 1931. 25 pp., several illustrations. No price.

Bulletin No. 1. Dr. Coleman's Report on Mysore Coffee Experiment Station and what it is doing for the Improvement of Mysore Coffee.

Bulletin No. 13. Improvement of the Coffee Industry in Mysore, by the Agricultural Chemist.

Bulletin No. 3. Report of the Coffee Experiment Station, Balehonnur, for 1925-30, by Dr. Coleman.

Bulletin No. 5. Annual Report of the Coffee Scientific Officer, 1930-31, by Dr. Coleman.

There are other reports of Leaf Disease, but no room here to give them, and now we will get right away to our usual market news:—

Coffee, on the whole, if quiet has been steady with unchanged rates for the finer qualities. Costa Ricas, however, have been less sought after and inferior Kenya have not been doing well nor did the lower grades of East Indian kinds, but good quality New Crop East Indians are considered to have sold well at the following rates:—

Mysore, bold good to fine greenish, 125s. to 131s. 6d.; bold medium, 121s.; medium, 103s.; peaberry, 139s. 6d.

Coorg, bold good greenish, 122s.; medium greenish, 102s. to 112s. 6d.; peaberry, 120s. to 126s. 6d.

Shevaroy, good bold greenish, 121s. 6d.; bold medium, 112s. 6d.; medium, 103s. 6d.; peaberry, 118s.

Kenya, bold common, 100s. 6d.; fair, 110s. 6d. to 116s.; good, 120s. 6d. to 127s.; fine, 130s. to 134s. 6d.; seconds, 85s. 6d. to 118s. 6d.; smalls, 76s. to 94s.; peaberry, 110s. to 136s.

Tanganyika, peaberry, 101s. 6d.

Toro, bold greenish, 86s. 6d. to 93s.; peaberry, 84s. 6d.

Costa Rica, bold common greyish and greenish, 98s. to 106s. 6d.; fair, 112s. to 113s.; good, 125s.; seconds, 82s. to 105s. 6d.; smalls, 69s. to 71s. 6d.; and peaberry, 103s. to 130s.

Other Products.

Coming to the more general market reports, we will start, as usual, with tea. Recent offerings of Indian kinds met with a fair demand, but sellers found prices irregular and not always satisfactory. Ceylons seem to have encountered a fairly quiet demand, but prices, on the whole, were fairly good for parcels of quality, other kinds ruling easier. Other reports speak of common teas as about steady, whilst medium kinds were weak. There is no doubt that during a week's sales demand and prices differed somewhat from day to day.

Moving on to fibres, we quote on page 44 from Messrs. Wigglesworth's circular with regard to sisal. Jute seems firmer and reports claim that sellers are reserved, believing that demand is im-

proving, especially with Calcutta quoting higher. Prices, however, are barely as high as last month, being around £19, against £19 10s. for firsts, c.i.f. Manila hemp is higher with J No. 2 at £20 5s., against £18 15s. before; K at £19 10s., against £17 15s.; M No. 1 £18 5s., against £17. Japan has been buying, possibly, we are told, for supplies out East. In this country, until it seemed certain that Manila hemp would be taxed, buyers for consumption, i.e., spinning, have kept quiet. Meanwhile, considerable efforts are being made to induce shipping lines and others to use East African sisal cordage instead of any other, now that it is claimed to be as satisfactory as Manila if given fair trials.

Moving along, we come to Shellac, which is quiet for spot sales with TN at 70s., fine Orange 80s. to 160s., AC Garnet 77s. 6d., and R.L.I. Button Lac 90s., against 71s., 80s. to 160s., 82s. 6d. and 92s. 6d. respectively a month ago. Palm kernels are higher at £13 17s. 6d., against £11 17s. 6d. Hamburg. Tin has not altered so much as it might have done considering the increased offers made but which were only partly absorbed. Finally spot cash stood at £140 2s. 6d. to £140 17s. 6d., against £141 15s. last month. Copper is lower and prices, one hears, are still tending in buyers' favour, and price quotations stand at £38 10s. to £39, against £40 15s. before.

Coming to finance, everybody is crowing over the drop in the Bank Rate in London from 6 to 5 per cent., after being at 6 per cent. since September 21, when we went off the Gold Standard. In spite of this, one cannot help wondering why the Swiss banks want 2 per cent. only and Paris 2½ per cent. With gold at 118s. an oz. or rather more, several millions of sovereigns, to say nothing of jewellery, &c., made of gold, have been purchased across the counter by dealers to re-sell to France or elsewhere at 27s. 6d. and the trade still goes on. As many are said to have made quite a fortune since the Gold Rush started, one wonders what price they pay in their turn. A slaughterman, accompanied by his pole axe, is reported to be bringing about 300 sovereigns every other day to one dealer, and another man, with a revolver, is bringing in £25,000 a week in sovereigns and half sovereigns, and there are hundreds of such cases. Yet they say there is no money in England. Silver, meanwhile, is still just under 20d. an oz. Regarding Bank Rates, except London, none have been changed since last month, so we can quote Brussels and New York at 3½ per cent., Milan and Berlin 7 per cent., Amsterdam 3 per cent., Paris 2½ per cent., and the Swiss Banks 2 per cent. Our usual table runs thus:—

	1932	1931	1930
FEBRUARY 27			
Bank rate	5 per cent.	3 per cent.	4½ per cent.
Consols 2½ p.c.	56½	53½	53½
Bar silver per oz.	19½d.	12½d.	19½d.
Exch. on New York	\$3.48½	\$4.85½	\$4.86

P.S.—New York on Feb. 25 dropped her rate to 3 per cent.

THE WORLD'S COCOA MARKET.

The Ivory Coast and its Cocoa.

BY THE CONTROLLING EDITOR

THOSE who handle cocoa—raw or manufactured, but mainly, of course, raw—on a large scale must, at the time of writing, be pondering deeply as to whether “Tariffs in March” will affect the price of cocoa to a useful extent by increasing the volume of trade and through that the purchasing power of this country. They can also reckon out what benefits they are likely to enjoy by dropping the Bank Rate to 5 per cent. (on February 18) and if there is any chance of its going lower still in the near future. After our trade has been becalmed for so long, breezes like these are bound to engender hopes which we trust will be partially, if not wholly, satisfied.

The French Ivory Coast.

Most of us for months, probably for the past two or three years, have been wondering what is, or what has been, going on in the French Ivory Coast so far as cocoa is concerned. Now we have a 36-paged report on the subject drawn up for the U.S. Government by Mr. Leonard J. Schwarz, their able Trade Commissioner over there. Issued *au pair* with Trade Promotion Series, No. 68, dealing with cocoa in our own Gold Coast Colony as well as in Nigeria, the Cameroons and Fernando Po (price 15 cents, also by Mr. Schwarz), this is T.P. Series No. 125, entitled “Cocoa in the Ivory Coast,” also costing 15 cents. It shows fairly clearly what the French hope to obtain in the way of raw cocoa and how they are already arranging to act after the cocoa crop has reached a certain level, say, 35,000 to 40,000 metric tons in 1935, against an estimated output of 25,000 tons last crop year, October-September, 1930-31, and 16,314 tons actual in 1929.

“It is estimated,” we are told, “that, approximately, 15,000 hectares (37,000 acres) of plantation lands have been set out with cocoa seedlings and these should come into bearing within a few years. The exact total acreage under cocoa is not known, but official estimates put the average yield per acre at 500 to 550 lb., this practically parallels the Gold Coast.” Now come some lines to which attention should be given. “The Government in the Ivory Coast is not making any special efforts in the direction of increasing the acreage under cocoa. As a matter of fact, now that production in the French colonies is approaching the home requirements of France, a movement may be inaugurated to divert labour to other crops, such as coffee, oil-palm products, &c.”

Ivory v. Gold.

Then we are given an interesting table to show that even if the Ivory Coast does reach 40,000 tons in 1935, it will have taken her thirty years to reach that quantity from the 2 tons (metric always) she turned out in 1905 (the year this paper started), whereas the Gold Coast, which exported 2 tons in 1893, increased to 200,838 tons in 1923, i.e., thirty years after. Why has this been? The will to work the areas under cocoa to rival the Gold Coast seems to exist or did so nearer the start, but whether the Government by now may be discouraging, or at least not encouraging, important increases, one feels that if the Gold Coast jumped from 2 to over 50,000 tons in twenty years and to 200,000 tons in thirty years, the Ivory Coast would have done the same if it could. Why could it not? This is surely a very important query to get a correct answer to, as so many have urged the Gold Coast on to further effort by using the Ivory Coast as a spur, whereas now it looks as if the Ivory Coast has no idea of reaching even 50,000 tons. This being so, what a different future can buyers and sellers alike look forward to.

It was only in 1915 (the second year of the Great War) that the French are said to have thoroughly pacified the natives over there, but having done so, development, especially with cocoa, seems to have gone well ahead. The first cocoa seed beans came from the Gold Coast and the first plantings were made near a village called Abengourou, just over the border from the Gold Coast. By the way, an excellent map is provided with many names clearly printed. This village, approximately, runs level with Kumasi as regards latitude.

Whilst there seems to be an immense area over which cocoa could be cultivated with ease, if not with profit—mention is made, for instance, of an immense forest, roughly put at 12,000,000 hectares or 29,640,000 acres—the Ivory Coast does not seem to be so thickly populated as our Colony; the density of their population is put at 5.47 inhabitants per square kilometre (approximately 14 to the square mile). The density in the Gold Coast is said to be roughly twice as much. Is this correct, for our Colony covers a vast area and is always grumbling at its inadequate population? With the Northern Territory, the Gold Coast is returned as covering 78,650 square miles, viz.: Ashanti 24,560, N. Territory 30,600, and the Gold Coast itself 23,490 square miles. This total area is supposed to have 2,033 Europeans and 2,108,461 Africans. Work

out the sum and see exactly how the two colonies compare over labour supplies. The area of the Ivory Coast is put (by Whittaker) at 126,100 square miles, with a population of 1,126,000, but Mr. Schwarz claims a population for it of 1,724,545 people. To the north of the Ivory Coast lies Haute Volta, a separate French Colony with over 3,000,000 inhabitants, said to be very poor, so much so that it is felt, when and as the Ivory Coast develops, and reports of more money and better times move through from there to the poorer race beyond, there will be a marked tendency for such individuals to gravitate towards the more prosperous centres, especially if the European plantations extend. It seems that throughout French West Africa the Government wisely claims the land and means to make the best use possible of it. Consequently all lands, except those over which the natives exercise their rights by usage, come under State control and can be obtained by non-Africans. Full details of this will be found on p.4. Unfortunately want of space prevents our saying more here. There is one matter pointed out by a leading Bahia planter which is perhaps worth noting by planters who secure copies of the report (from Dept. of Commerce, Washington, or Bush House, London), and it is this. On pages 14-17, the report speaks of the planting as though it were something new, whereas it reads as being very much like the system which is always adopted in Brazil and perhaps elsewhere.

This remark arose in connection with the claim that the Gold Coast produced 270,000 tons in 1930. Such an idea, of course, attracted close attention in Bahia and a lengthy statement on the matter has come our way, but feeling that enough has been said we will quote the concluding paragraph only. "The Gold Coast exports and, according to Government reports, the production has been more or less steady, fluctuating between 200,000 and 240,000 tons for the six years following 1923. This being so, it is incredible that during the last three years, at and during a time of general depression, there should have been a sudden increase of unprecedented size in the production and that such increase should have been carefully concealed (or lost sight of) by all the Government officials concerned, and that the existence of a concealed stock of, say, 80,000 to 90,000 tons should not have been discovered by anyone, including the American Trade Commission."

Is America Penalising West African Cocoa?

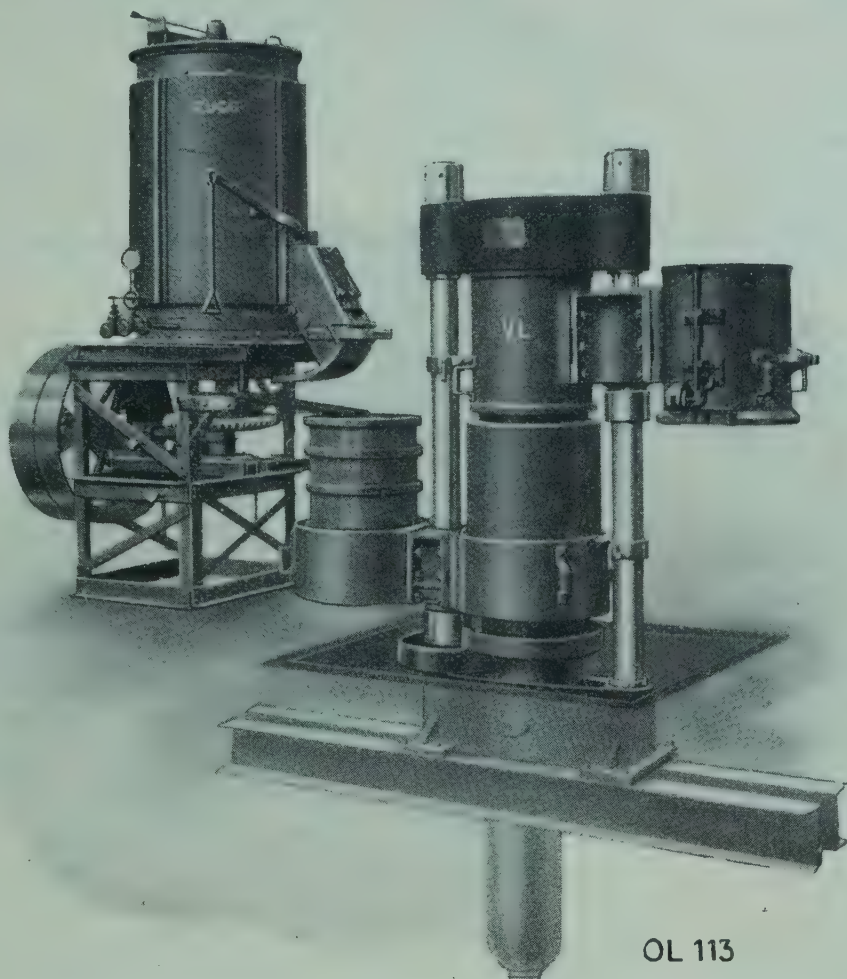
Before calling attention to Messrs. Wessel's Annual Report, a perfect encyclopædia of news concerning cocoa, readers interested in the article should secure full particulars of coming events in America, concerning what cocoa may or may not enter therein, with special reference to West African kinds.

The new regulations are both drastic and elastic, but tend to stretch always (if at all) against the shipper. Is this, one wonders, why America last year was such a poor supporter of West African, particularly Gold Coast, cocoa? Knowing what was coming, were they given a year or, in fact two years, in which to "swop horses." Four notices seem to have been put forth recently in Washington to regulate the import of raw cocoa. One came into force on October 1, 1931, one is to be made use of from April 1 next, and a third and fourth, perhaps still more drastic, seem timed to start from April 1, 1933, and October 1, 1933.

The Cocoa Association of London, Ltd., are fully alive to the seriousness of these new regulations, especially to the effect they may have on our West African cocoa and have accordingly dispatched a letter to our Foreign Office asking that Department to get into touch with our Ambassador at Washington and protest against the regulations as being unfair and detrimental to trade between the British Colonies and America. "It has been suggested," the letter points out, "by the Acting Director of Agriculture at Accra that when the new regulations come into force on April 1, the rejections of Gold Coast cocoa reaching the U.S.A. after that date may be as high as 30 per cent." The Association has also asked Lloyds to support their representations to the Foreign Office, since this body, as the insurers of such shipments (as a rule) have made it clear that if the notices referred to are put into force it must ultimately lead to insurance rates on covers on full terms being advanced to such a point as to render the business prohibitive to shippers. If the Cocoa Association of London (84, Leadenhall Street, E.C.3) have any copies of their January-February report left, try and get one, as it discusses the matter fully in a way that goes far to prove the usefulness of such a body.

Messrs. Wessel's Report.

I must postpone until the April issue much that should have been said concerning the above report in this number, but do let us note the following hopeless discrepancies in the annual returns and then ask ourselves how and when can we look for such important figures being issued from a reliable source so that the real figures alone will be published. As Messrs. Wessel's figures appeared some time after the others can more reliance be put in them? For instance, this American firm (who should know their own figures best) speak of their deliveries for consumption last year as having been 185,000 tons, the same as in 1929. Other returns, however, put their 1929 consumption as having been 220,000 tons and so the totals for that year naturally do not tally. In the following table Messrs. Wessel's name is given but the others go by numbers only:—



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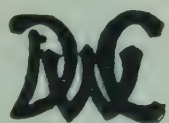
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Cocoa World Production and Consumption.

Production—Metric tons.

	1931 TONS	1930 TONS	1929 TONS
Wessel's totals	548,000	475,000	526,000
Others—No. 1	529,000	476,000	527,000
„ No. 2	528,250	479,359	536,199
„ No. 3	513,000	513,000	538,000

Consumption—

	1931 TONS	1930 TONS	1929 TONS
Wessel's totals	534,000	480,000	499,500
Others—No. 1	526,000	483,000	540,000
„ No. 2	522,350	486,396	550,302
„ No. 3	545,000	514,000	522,000

With regard to Production, the difference last year between Nos. 2 and 3 may have been made after a deduction, in the case of No. 3, of $1\frac{1}{2}$ per cent. loss on account of loss *en voyage*. Making every allowance, however, who can truthfully estimate what the world's output and needs have been year by year? Add up the four totals for last year and the average production works out at 529,000 as the production and 532,000 tons as consumption. May such figures be correct.

Board of Trade Returns for U.K.

This month we have a welcome increase in our deliveries for H.C. over January for last year and still more so over January, 1929, say:—

BOARD OF TRADE RETURNS FOR THE U.K. JANUARY ONLY.

RAW COCOA ONLY	LANDED TONS	INCL. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK TONS
JAN. 1930	11,450	10,455	4,663	189	37,500
1931	7,823	6,908	5,339	429	30,000
1932	11,032	10,352	7,793	213	32,200

Inc. 3,210 Inc. 3,444 Inc. 2,454 Dec. 216 Inc. 2,200

Prices and Quotations.

Here one can only say that there seems no change. Grenadas on the spot are worth up to 37s. or 38s. with Accras nearing 30s., against sellers on f.o.b. terms at 29s. 6d. with the £ \$3.48½ cts. It will be of importance to see, as America puts the screw on cocoa entering her ports, on the various dates already referred to, who will receive their unwanted parcels. One rather fears that it will be this country. In such cases it is sincerely to be hoped that the West African merchants will also apply the screw, and having, according to one report, lost over £1,000,000 last year, which they "gave" to the natives for cocoa that was not worth the prices paid, take good care to pick out "decent" cocoa only and leave the rest as object lessons for the producers to remind them that what is not good enough for America is no longer good enough for ourselves.

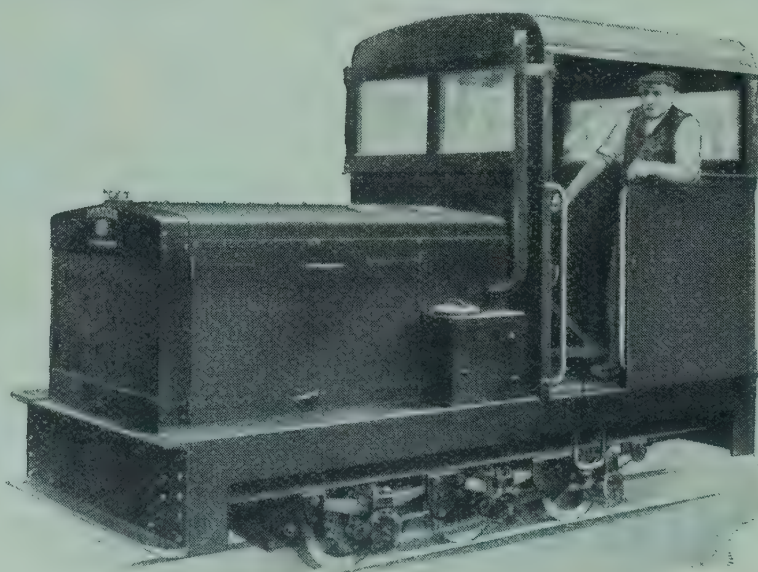
PETROL LOCOMOTIVES



DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ "
20	2½ "
20	4 "
27	5 "
50/70	10 "

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IN TOUCH WITH EVENTS

The death is reported from Honolulu of Princess Kalania'ole, the last survivor of the former Royal House of Hawaii, which lost their throne when Queen Liliuokalani, who survived until 1917, was deposed in 1893.

* * *

The King has been pleased to approve the appointment of the nephew of our Editor, Lieutenant-Colonel and Brevet Colonel P. H. Mitchiner, T.D., M.D., M.S., F.R.C.S., Royal Army Medical Corps (T.A.), as Hon Surgeon to His Majesty in succession to Colonel R. E. Bickerton, D.S.O., T.D., M.B., T.A., who has retired.

The Times of March 11 told us that Lord Dawson of Penn and Sir Henry S. Wellcome, founder of the Wellcome Research Institution, have been elected honorary Fellows of the Royal College of Surgeons.

* * *

That love story of music "Waltzes from Vienna" continues to go strong. Like the "Blue Danube" waltz itself, one feels it can never fade from the memory of those who have seen and heard it once or many times and that those who do not flock to the Alhambra to see it will be sorry for ever after. It has one blemish, to our mind, however, in the person of the conductor. Why should two-thirds of his body be allowed to intervene between those in the centre of the stalls and the stage? Standing up as he does, Alexandra Danilova, the Première Danseuse, is wasted. She simply pirouetted to the conductor. Those behind see nothing of her until she moves off at the side.

* * *

A letter in the *Times* of March 21, signed by leading men and women in London, starts by pointing out that the Chinese floods of last summer constitute one of the biggest recorded disasters of this kind in human history. According to aerial surveys, in which Colonel Lindbergh's assistance will be remembered, the seriously flooded areas were larger than the whole of England. In these areas the crops, livestock, and practically all the houses and implements were destroyed. The number of persons drowned can never be known.

The Madras Agricultural Journal for February starts with three useful articles on sorghum production, viz.:—

1. Chemistry in the Production and Utilization of Sorghum.
2. The Entomology of the Sorghum Plant in S. India.
3. Sorghum Diseases in S. India, together with a report of the discussion on all three papers which were read at a Conference of the Madras Agricultural Students' Union, Coimbatore.

* * *

Mr. Douglas M. Gane, of London, writing in *The Times* of February 22, called attention to the marvellously perfect teeth of the isolated islanders of Tristan da Cunha. Of the total population, numbering 156, the teeth of 131 were found to be entirely free from decay although never cleaned. The oldest man in the island, aged 75, had a complete set, and his physical condition was said to be extraordinary. The inquiries made, based largely on the natives' own views, point to the absence of meat except on high days and holidays. Flour, groceries and tea are known, but used only after visits from the outside world. Potatoes are the chief food, then come fish, milk, and penguins' eggs. A big item in the possible explanation of their teeth and health may arise, it is thought, from the fact that they never eat more than one food at a time. The letter covers more than half a column and contains much useful information.

* * *

In the column next to the above we are reminded that Washington—need we say George Washington, the first President of America—was born on February 22, 1732, just 200 years ago. It was a period of commanding figures to this generation, but put all the notabilities of the countries at that time together and Washington would be best known probably to the average man and woman of to-day who take any interest in those who have been master-builders of the world, its politics and aspirations, its arts and crafts of to-day.

Active buyers of sweepstake tickets are said to have been in evidence for the Derby at Epsom even before the results of the Grand National sweep had been made known. Probably this was owing to the large sum, approaching £3,500,000, paid for the Grand National sweep tickets. Even knocking off £1,000,000 for the Irish Hospitals (which actually were allocated £800,000) and expenses, sufficient money was left for the following prizes:—

	£
22 First prizes of	30,000 each
22 Second „ „	15,000 „
22 Third „ „	10,000 „

as well as over 1,000 prizes of £686 each, over 2,000 of £100 each, and a number of other prizes ranging in value from £3,000 to £7,000 each. When one sees such a long list, even if aware that 7,000,000 tickets (or nearly so) had been sold, each one is surprised that he or she has not drawn at least £100. The marvel is that any individual secures one. In this case London and its environs seem to have come off with a full share.

* * *

Two men shook hands on March 15 over an achievement which promises to become more and more an acknowledged milestone in the progress of the world's great engineering feats as the years roll by. We are referring to the completion and formal handing over of the £9,000,000 bridge, built by Messrs. Dorman, Long & Co., one of our leading engineers, which spans Sydney Harbour. Most of us have seen illustrations of this bridge at one period or another of its construction, but how many of us realised what it was costing. Costing as much as it has done, it will last much longer and do far more good than one could possibly expect from a modern ironclad, which seems to cost as much money to construct. The two men (among others) who shook hands were Mr. Ennis, who had superintended the work on behalf of the builders, and Mr. M. A. Davidson, New South Wales's Secretary for Public Works, when the completed task was handed over.

* * *

It must have been pleasant to hear Mr. Kitson, the deputy chairman of Messrs. Dorman, Long, replying to Mr. Davidson when he thanked him for his appreciative references to his firm on the way they had carried out their contract. "I think," he told those present, "we have done our best. We sent the best man at our disposal and we are proud of the way in which Mr. Ennis has done the job." The bridge undoubtedly is the, or one of the, greatest engineering feats of the age. Those therefore, governments or otherwise, needing a bridge or other engineering schemes of large (or small) dimensions to be carried out, will know which country and which firm to approach.

The Report of the Hawaii Agricultural Experiment Station for 1930, issued last June (price 10 cts., 38 pp., from the Superintendent of Documents, Washington, D.C.), has a very "mixed grill," but each one is pleasant and carefully prepared. Figure 9 on page 17 shows a tangle of wood like some huge bird's nest, the appearance being explained by the note below the photograph saying that the (coffee) tree was about 30 years old when the photograph was taken in June, 1930. The clean trunk had been all but severed about a foot off the ground, showing an equally clean second foot ending in a mass of old unproductive lateral branches that could be of no good to the estate owner, except as an example of what can happen if you only top your coffee trees to keep them low for easy picking and do not cut out the side branches regularly.

On page 24 we are told that approximately 50,000 bags of coffee have been exported from Hawaii annually within recent years. Most of the growers lease the land from the large land-owners. Some of them plant the trees entirely too close, and then if, to avoid overcrowding later on, severe pruning is resorted to, stunted trees are the result. Experiments are now being carried out with a view to standardising the coffee of Hawaii by vegetative methods of production.

Among the plants new to, or rarely cultivated in, the Hawaii islands and which are being experimentally developed with a view to seeing if they can be cultivated on a commercial basis in the island, is, one notes, the cacao tree. Seedlings or trees first came from Rarotonga, of the Tonga group of the South Sea Islands, whilst later 125 seeds came from Papeete, in Tahiti. Those hoping to establish a fruit, especially a citrus fruit industry, in our Gold Coast Colony, should study the names of the 77 species of fruit (with the names of the centres from which received) being experimented with in Hawaii as described above.

* * *

In our November issue, p. 205, we discussed Mr. Frattini and his views on spraying coffee, concluding our remarks by asking "Where is Frattini now?" We are glad to hear that our friend is both alive and well, also that he is in a groove at the moment which does not please him, for he wrote by air mail as follows on March 4:—

"Your appeal on p. 205 in the November issue "Where is Frattini now?" compels me to write you a few lines, but only a few as the mail is closing. I should very much like to get back into coffee, my experience here in Southern India should enable me to serve East Africa, or other coffee centre, well, if I were engaged on coffee work over there or on any agricultural work if I cannot get back to coffee, which I much prefer to my present job."

between conditions tending to induce the reproductive phase and those which favour the setting of the fruit. It must be remembered that flowering of sisal takes place all over the (sisal) world and that, therefore, the conditions leading to flowering are common. Yet, in only one place has seed production been recorded, though it must be remembered that a transition between the obstinate unfruitfulness of the plains and the fruiting in the highlands is to be seen. Two observations which may have a bearing on the problem are as follows: Flowers in the highlands absciss much less readily than on the plains. On the plains the regular line of abscission is very clearly marked and flowers in all stages absciss (break away) readily along that line with the application of a little force. The regular line of abscission is not so well marked up-country and, where flowers are broken from the stem by force, the fracture is often irregular and at an angle to the normal abscission. It is therefore conceivable that fruiting (and hence seed production, Ed., T.L.) is dependent on the absence of conditions which cause the abscission of the fertilized ovary. There has yet to be explained the fact that no fruits are produced on uninjured poles, whereas on the cut ones they abound. What stimulus, due to wounding or to other causes, prevents the normal abscission of the flowers?"

The discussion continues, but we have said enough to excite the interest of anyone at all keen on the matter. For the rest, they must look up the original Report. There are, however, two queries which all should raise and get answered, either by their own cultural experiments or from the efforts of others.

(1) When the production of sisal seed for propagation is an established fact, will some of the strains of sisal produced from such seed tend to please buyers to a greater extent than does the fibre, as at present, produced from bulbils or suckers? and—

(2) Is it the idea, when seed is obtained in assured quantities that we shall be able to breed improved varieties, i.e., varieties that will prove more attractive and sell at a higher price to pay, as a raw material for rope, twines or dress material, &c., than anything we have at present?

In conclusion may I point out that makers of cultivating machinery should note what is said (p. 306) *re* old roads and hardened areas producing better sisal. Instead of, or rather as well as, ploughing up the soil, can we also arrange to beat it down or compress it, since old roadways are considered to make excellent planting areas.

Shifting to Yucatan Señor Rafael Peón writes *re* sisal knives as used in Yucatan. This is what he says: "The knives used in Yucatan are the same as, or equal to, the No. 147 in the page of illustrations in your September issue, and run

about 9 or 10 inches long and are made in England, but not, I fancy, by any name that you mention. Hooked knives are very little used because they are supposed to damage the plants, when cutting the leaves, by pulling and shaking the plants. Hooked knives are made here in Yucatan, much like your No. 149, except that the wood handle goes into a cone in which ends the knife (like a cacao pruner, presumably, Ed., T.L.) and not the metal blade into the wood as your (No. 149) drawing. This make is called *coas* and is chiefly used for cleaning up the plantations, that is for cutting out the undergrowth and other vegetation to be found there.

"When cropping, the man cuts and places the leaves in piles of fifty and afterwards proceeds to take off the side spikes. He does this by picking (up) each leaf with the point of his knife and then, with the back, he crushes the spikes. Other men cut off a fine strip on each side in order to take off the thorns. Some planters complain that lifting up the leaves on the point of the knife tends to cut some of the fibre strands, which are thus lost when going through the decorticator. Thus they advise the use of knives with a sharp point [Are the leaves too prickly to be taken up by hand? If so what happens when, as must be, they are held firmly to have the spikes knocked or otherwise stripped off?—Ed., T.L.] or a file with a point for picking up the leaves and taking off the side spikes instead of using the back of the knife. These latter are seldom used and no one uses a saw-edge knife."

In our office are samples of sisal from San Domingo, from Venezuela (Bolívar district) and from Portuguese East Africa; we have not yet had one from Haiti; we hope that one will come our way soon.

The U.S. Consul at Port-au-Prince, speaks of six producing companies over there and claims, according to *The Cord Age* of New York, that they are all arranging to increase their present acreage considerably. Does this mean that, even at present or recent values, Haiti can produce fibre to pay, especially if the much-discussed minimum wage law is put into force? We can hardly believe so, especially as the manager of an estate at Cap Haitien, said to employ 2,000 men, has stated that any law that tends to increase costs or change the handling of the labour or management of the estate, will cause the place to be shut down. Started in 1925, 31½ tons (1,000 kos.) were exported during the year ending September 30, 1928, followed by 47½ tons in 1928-29, and 364 tons in 1929-30, whilst during the nine months ending June 30th, 1931, 732 tons were shipped. The output certainly grew apace and, at present values, one wonders what the 1931-32 figures will reach to. How do the San Domingo exports compare with these figures?

HERE AND THERE.

We have never been satisfied with the way in which Brazil on the whole treated her coffee. The waste of water must often be criminal, especially with the "wash out" of the coffee from the cement or other gullies along which the crop is run out *en route* for the drying grounds. We have discussed the matter with an experienced authority on such matters, one who has studied coffee production on the estates in Sao Paulo and elsewhere as well as sugar growing in the Argentine, caliche mining and nitrate of soda production in Chili, and sisal growing in Ceylon. We hope later on to return to the matter: when we do we shall tackle coffee first and hope that leading growers in Brazil, East Africa, Southern India, etc., will benefit on the one hand, and the engineers and others specialising in new methods will secure the orders they deserve, even in these days when money is so scarce. In our opinion the water, or at least two-thirds or three-quarters of it, can be cleansed and used again when the supply renders it best to do so.

Another matter we have been investigating refers to the use of centrifugals for the drying of sisal fibre. "Excellent idea," we were told, "but you must use the large machines, five feet in diameter, if not six feet, and two feet deep, equipped with an underfeed. That leaves you all clear and plenty of room in which to lay your strands evenly round the basins and then—off they go." We shall be pleased to go fully into this matter with any producer genuinely interested in the principle, or with a better one if they care to tell us about it. The idea of roller-pressing the wet fibre does not seem, on the whole, to find favour, the difficulty (some say the impossibility) of feeding the fibre to the rollers evenly and quickly being the snag in the matter.

According to the *Bulletin* for February 1 of the *Institut Colonial de Marseille*, the coolies employed on the East Coast of Sumatra during the first half of last year (on the authority of the Chamber of Commerce at Medan) fell from 334,169 to 294,010 on December 31, 1930, and then to 269,576 at the end of June. We are not told what caused these reductions or what became of the labourers. The drop in the trade done over that area must, however, be very serious.

Bulletin 62 of the Hawaiian Agriculture Experiment Station at Honolulu, is by Mr. Charles Richter, their assistant chemist, who tells us

much about the "Physical Properties of Hawaii Soils with special reference to the Colloidal Fraction" (45 pp., price 15 cts.).

Bulletin No. 63 is by Mr. J. C. Ripperton, the chemist who discusses the "Physicochemical Properties of edible Canna and Potato Starches" (48 pp., price 10 cts.).

Presiding at the Thirty-Fifth Annual General Meeting of Bovril, Ltd., Lord Luke of Pavenham, as Chairman, reminded the shareholders that the Bovril Australian subsidiary ran their cattle estates of many million acres in Australia, whilst the Argentine estates of Bovril Ltd. performed a similar service in the Argentine.

For twenty-five years, he said, Bovril had not only catered to the British appetite for Beef, but had been almost an almanack of British humour, and he instanced one of their recent slogans, viz. "Drink Bovril—once it's in you it's sinew," and then gave well-known instances of their Mr. Bovril and Mrs. Bovril series.

Sir James Crichton-Browne said: It was perhaps hazardous to indulge in prophecy, but he ventured to predict that better and brighter days were in store.

Referring to Lord Playfair, the first Chairman of the Bovril Company, and one of the highest authorities on the chemistry of foods, Sir James went on to say that we were perhaps just a little forgetful of the great fundamental principles of dietetics laid down in his time. All attention was concentrated at present on the vitamins and hormones. The discovery of these was a momentous advance, but there was in some quarters a tendency to magnify their rôle. With all their virtues, they were not foods, and though you might be supplied with a pound of each of them daily, you would perish miserably of starvation. We must go back to the fundamental and essential elements of food, the proteins, the carbohydrates, the fats and the mineral constituents, and if we partook of them in sufficient variety we could safely leave the vitamins and hormones to look after themselves.

Queries to hand since our last appearance include the names of books and their price, having to do with the production and fermentation of cacao, and also with tobacco, coffee and tea. What can one gather from such inquiries? Do non-Europeans or Americans still find current prices and future prospects enticing enough for them to wish either to extend and bring up to date their present areas or to open up fresh lands in Sumatra or the Federated Malay States?

AMAZON PLANTATION RUBBER.

Will Henry Ford Succeed—and at what Price?

HAVE you, in the Tropics, ever watched "crazy ants" rushing here and there, apparently, as a rule, in circular routes but always in such a way as to give you the impression that they do not know where they want to go nor how to get there? How many of us just now are rushing round, mentally if not physically like crazy ants and then sit up and wonder why—although tired out and exhausted—we have made no progress.

On the other hand, watch the parasol or carrying ant, the plague of every estate owner, but that is not our concern at the moment. How different they are to the crazy ones. Big, bold, assured and knowing exactly what they are out for and what they will do with that which they are all marching to secure. If you are really interested and have much patience you can watch them secure their piece of leaf or other vegetable matter and then, holding it aloft (hence their name, parasol ants) march back in the same self-confident way to where they come from. It may be that they arrive home only to find their nest has been, or is being, dug out and "puddled" to drown the occupants. Without showing signs of dismay after the first excitement, the ants move off elsewhere and start making another nest. Anyone who knows their nests knows what that means, and so, whilst you expend money and time, often much temper and many bad words in getting rid of the pest, when you are away from the scene of trouble you must, if you are a worker yourself, admire the parasol ant and wish he could secure all he wants at the expense of the uncultivated areas and not on your lands.

Henry Ford, with his plantation rubber venture on the Amazon, reminds us of the parasol ant. Nothing seems to daunt him, to cause him to turn back or even to take another path, and you feel too that if, like the ant, he found one home or venture had come to grief, undismayed and unruffled, he would at once start to build up another. Thus, as with the ant, because Henry Ford is a worker, standing tall, erect and unperturbed in the midst of many crazy folks, you cannot help wishing he may succeed, although, as a producer of more rubber, you would like to "puddle" him out of existence, as he can never do himself any good and can do the present producers a good deal of harm if his money lasts out.

We are moved to write in this strain because such ideas have been at the back of our mind ever since we realised that the "Ford Rubber Plantation Campaign" was not merely gossip. Now the February issue of our very old friend, the *Indian Rubber World* of New York, would

have us believe that things are going ahead there and the Ford Rubber Plantations means to stay, although it is only a few years ago that the start was made. What we have still to be told is the cost per lb. of the rubber, even when there are at least 100,000 trees in "full tap." No one denies that the trees can be planted and made to arrive at maturity, but that we all know is not the object sought after. The production of rubber on a commercial basis is what Mr. Ford, his son and their colleagues are striving to secure. Will they succeed, even if rubber goes back to 2s. lb., instead of about 2d. lb., as has been the case lately in America if not elsewhere?

The Ford Motor Co., we are told, alone calls for more than 50,000,000 lb. of rubber annually, in the rubber tyres, tubes, motor fittings, &c., that their cars need. Will the Amazon venture ever supply those fifty millions, and if so, what will the world price of rubber drop to when it does? Even if only 5,000,000 lb. are shipped from Boa Vista (Ford's headquarters and shipping port up the Amazon) when the 4,200 acres now cleared and "nearly all planted with rubber," are reaching maturity, whatever loss per lb. would that rubber stand in for? The *I.R.W.*'s account of the way the work is being carried out is amazingly interesting; we would like to have reproduced several paragraphs but have not the room. We can say this, however, although it is now over fifteen years since we published the "Rubber Industry of the Amazon," much that we urged at that time has been put into practice. In 1915-1916 everyone laughed at the idea of plantation rubber up the Amazon, even at the current values of those days. Who ever would have dreamed of such a thing even of Henry Ford, marching along as he is doing with rubber at 4 or 5 cents in America and about 3d. lb. over here? At 3s. lb. it was reckoned costs might be covered, but at no lower figure.

First and foremost, such success as can be observed is mainly due to the fact that the labour is to be fed from locally grown crops, preferably from the workmen's own gardens and not imported at high costs for poor quality. Buildings, one storey high, resting on concrete foundations are being erected on tropical lines. The dormitories accommodate 52 unmarried labourers each and there were already 102 small houses, with wide eaves or verandahs on two sides (illustration given in the *I.R.W.*) for married men with families, and at least another 400 are to be erected with local timber, &c. All workers are given power, light, ice and excellent drinking water. Hospitals and medical supervision are there. Married men

are encouraged to bring their families with them by the offer of a large piece of ground for each family. In addition the plantation runs well-stocked hog and chicken farms, vegetable gardens and fruit orchards. Engineers and others are designing schools, parks, recreation halls and club-houses for a working population of 6,000 to 10,000 souls, and efforts are being made to supply food, clothes, footwear, furniture, &c., of approved quality for those who prefer to buy them instead of going to the riverside markets. And so our dream has come true to a certain extent. Whatever happens one cannot help praying that this experiment will at least help permanently to open up and populate this section of the Amazon forest, 610 miles from Para, to a degree that will ensure the time and money now being expended on it from "going back to jungle" again, as so many seem to believe must be the case. The cost of the resultant rubber must be heavy, for even if the capital is allowed to sink and be forgotten, at what price can the rubber produced be placed on the market against the East? Take away Henry Ford himself, certainly remove both

father and son, then what will happen? How many years must roll by with the present financial and moral (Ford) grip still supreme to enable that Colony to make good only with able men, but no master minds and super-rich millionaires in charge? The Rockefeller Research and Medical Association has long striven to benefit South America by establishing stations with skilled Americans in charge. Has any one of the outlying stations prospered when the Americans were withdrawn? Have not the old advisers been forced to return or else allow the stations to go "to bush"? How long will it be before the Ford Plantation, merely as a colony or settlement, quite apart from the cost of the rubber produced, will be immune from the certain risk of having to follow that lead of the medical stations and revert to jungle once American money, stamina and the determination to win through has been removed? Now all are parasol ants marching on, thanks to the law and order that rules all. If you take away the compass or the leaders, will that cause the "crazy ants" only to be seen again?



RAISIN CULTURE IN AUSTRALIA.*

BY P. E. DONNIER.

WITH the slogan "Eat more Fruit" ever before us, it may be of interest to know how raisins are grown and made in the world-famous irrigation settlements of Mildura in Victoria and Renmark in South Australia.

An intending fruit farmer with a limited capital takes up virgin bush land, clears it of trees and bushes, fences it and generally prepares it for planting. The laying out of a vineyard or orchard is of the utmost importance to future ploughing and scarifying of the ground; you may thus work the horses in any direction you wish.

Each vine should be ten feet away from any of its nearest neighbours in every direction. The most popular and best variety of grapes for making raisins is the Muscatel or "Gordo Blanco." The new settler can either buy already rooted plants or get cuttings, at pruning time, from an already well-established vineyard, as generally the cuttings from pruning are burnt unrooted.

A cutting should be about two feet long, with at least two eyes on it: one to be buried in the ground, and the other left above ground. A furrow about six to eight inches deep is drawn and the cuttings put into it standing up and the furrow covered in. Until the planting out season

arrives, these cuttings are striking root; in the meantime, indicate with pegs where the young plants are to be planted, dig the holes in the manner described above; thus, regular rows are formed in all directions, each row being ten feet apart.

For planting vines, the holes should be about a foot square and a foot deep. Select the strongest and the best-rooted plants, spread the roots out and fill in the hole. Thus the planting is over and nothing further need be done except weeding and hoeing round the plant until late autumn, when the pruning season arrives. Very little, if any, pruning is necessary the first season, but ploughing must be done between the rows, and the ground left open until early spring, when scarifying or harrowing is necessary. As it takes three years before a young vineyard returns a payable crop, the settler may grow anything he likes in between the rows to keep the "pot boiling," and if the ground is rich, it would not impoverish the soil to any great extent as the roots of the vine strike to a very great depth, if the ground allows, but I am not in favour of this method if it can possibly be avoided.

The maxim of "Train a boy the way you want him to go" may very well be applied to a young vineyard, as the crops depend a great deal on the shape of the plant, and, as with a boy, start as early as you can. The correct way to prune a vine is to have the crown of the vine as flat and

* Those who have by now studied the paper read by Mr. W. G. Freeman in the *Journal of the Royal Society of Arts* on "The Empire Fruit Industry" (see our March issue, p. 49), will be interested to read the above.

even as possible; it should be the shape of a dinner plate with no more than from six to seven branches as evenly divided as possible round the crown. There should be but one storey of branches on a well-pruned plant; all other shoots should be rigorously cut away, as also all dead wood. It may take two or even more prunings to bring thus a young vine into proper shape.

Pruning should take place as soon as the leaves have fallen. In leaving it too late, on the return of the sap the vine bleeds when cut and this is very harmful to it later, for instead of feeding the new growth the sap is lost. Although, to my knowledge, phylloxera, that scourge of the vineyard, has not found its way to Australia, by adopting the axiom, "Prevention is better than cure," many vine and raisin growers spray their vineyards with a strong disinfectant, killing all insects that may lurk under the bark or in the cracks of the branches. When the young shoots are growing, avoid touching them as far as possible, as they are very tender and break off very easily, thus losing you perhaps several pounds of raisins.

During January the grapes are ripe to pick; they should be cut with secateurs (shears) and not pulled off. The bunches are laid on wooden trays (two unplanned thin boards held together by a batten at each end) and laid out in the sun between the rows of the vines. Unless rain threatens, which is seldom at this time of the year, they can be left thus, even during the night, for three or four days until they are of the right dryness; then they are turned top to bottom so as to dry them evenly. As the skin of the Muscatel is rather thick and tough, many raisin growers, before laying the grapes on the trays to dry, dip them into boiling water containing a small portion of caustic soda. Without harming the berries in any way, the solution cracks the skin slightly and helps the drying process considerably.

Care must be taken not to collect the now manufactured raisins too soon, nor to let them dry too much; they should, when opening a berry, be still fleshy and soft inside. When just of the right consistency the raisins are gathered into large wooden boxes and stacked away under shelter and left there, literally to sweat, for a matter of a month or six weeks. The best and largest clusters are then sorted out and become our Christmas table raisins and are forthwith packed for the market. The rest of them are then stemmed and graded by the same machine, packed and labelled according to colour and size, also ready for market.

It takes approximately three tons of green fruit to make one ton of raisins. I am greatly in favour of growing the vine under irrigation, as just before the grapes ripen a swamping of the vineyard makes a tremendous difference to the size of the berries. Rain fails or is, at least, not sufficient to affect a crop as irrigation does, and should rain come, it is generally in the shape of a heavy

thunderstorm doing perhaps a great deal of damage, such as tearing away the already heavily fruit laden branches from the stem.

* * *

Raisin growing is one of the most pleasant occupations a man may choose, and a profitable one, if carried on in a systematic and careful way. I may perhaps add that at Mildura I gathered from a four year old vineyard under irrigation three tons of Muscatel grapes from one acre, equivalent to one ton of raisins.

* * *

Later on, when answering some queries we raised as to the advantages and disadvantages of irrigation grown crops, grapes especially, Mr. Donnier, wrote:—

"My experiences as a raisin grower are restricted to Renmark and Mildura. These areas called the Mallee belt would be useless for fruit growing unless under irrigation as the rainfall alone is insufficient. I admit and appreciate your points with reference to 'swelling' the berries by means of water artificially supplied and there is a great deal of logic in your argument. I would still maintain, however, that irrigation (but not to excess) is still a good thing in many ways and it does not matter how long it takes to dry a berry to the right degree.

"Irrigation to the right degree at the right moment, say once a month before picking the grapes, adds both to their size and flavour and causes the berries, when dried and ready for market, to be more fleshy. This I believe favours their sale when marketed. They also, I consider, have more flavour and contain more sugar, etc., which the average housewife looks for."

What America has done for Cuba and her Sugar.

FOR the *raison d'être* of the Chadbourne Scheme to regulate the output of sugar, concerning which we discussed in the leading article of our February issue, Messrs. James S. Connell and Son, of New York, pointed out recently that "one must look back twelve years to 1920, when false propaganda of an impending shortage in sugar supplies (which, in reality, was never seriously threatened) led to an orgy of wild speculation in sugar, which forced prices to the unprecedented high levels of 22½ cents per lb. for raws and 26½ cents for refined." To-day—February 11—the Term market quotation for raw sugar is less than a cent, having just dropped ten points to 0.89 cents.

"Our large banking institutions," the report goes on to say, "thought they saw their opportunity to secure control of the sugar industry of Cuba—promising them, as they thought, large returns on their investments. With child-like

simplicity they made advances to the extent of 60 to 80 per cent. on the prevailing value of sugar, opened letters of credit for full invoice valuation for refiners to purchase sugar and extended credits to wholesale grocers, jobbers and dealers with a readiness that seemed to indicate their perfect confidence in the permanence of the excessively high prices then ruling or the maintenance of such extreme values until they were reimbursed for their advances. When sugar prices fell 15 cents per pound in a few months and continued steadily downward, they faced a very different situation and were obliged to run to cover and protect themselves as far as possible. Their debtors could not repay them, foreclosures followed and the sugar industry of Cuba came under the control of the banks. To recoup their heavy losses the American banking groups then proceeded to expand the properties under their control, with a view to mass production at low cost which would crowd the smaller Cuban producers to the wall. In this they were not conspicuously successful, and the result has been the enormous over-production from which the whole sugar industry has since suffered.

"Perhaps the time has come for the sugar industry of Cuba to revert to its original owners, under whose regime the crop was handled intelligently, conservatively and marketed far better and more economically than it has been for the past decade. The Scheme was formulated for the particular advantage of special interests to whom it was an immediate and important aid in what it first accomplished, viz., in securing the co-operation of the Cuban Government and the issuing of Government gold bonds, to the extent of some 42,000,000 dollars, to protect advances made by large American banking groups to Cuban mill owners—these bonds, against which the sugar crop was pledged and which were further secured by all the resources of Cuba, replaced as collateral the worthless paper obligations of the bankrupt Cuban debtors."

And this is the country who has thoroughly upset the price of sugar for our Colonies and every other producer except themselves. Yet, in spite of this, in spite of having caused Cuba to cut down her 6,000,000 tons possible output first to 3,000,000 and now, it is proposed, to 2,180,000 tons, America is not cutting down her own output by a single ton.

* * *

Since writing the above in mid-February for the March issue, when pressure on our space caused it to be held over, we have received the following letter from Messrs. James S. Connell & Son in reference to our leading article in February, a copy of which we sent to them and asked for their views on the matter. This is the reply:—

You asked for our views and criticisms on the

marked article in "Tropical Life" and we have the following comments to make, which may be in line with what you want:—

We feel that you are under a misapprehension in assuming that there was any commitment upon the part of the United States to absorb the full quota of Cuba sugar allocated to this country from the crop of 1931 under the Chadbourne Plan. That was a purely arbitrary amount, fixed by Cuba—supposedly based upon requirements here; but which it was apparent early in the season would be much in excess of our needs in respect to Cubas. As long ago as May, 1931, we pointed out that there would be an excess supply carried over here and in Cuba of at least 750,000 tons, which was actually increased to nearly 1,000,000 tons, partly because of the shrinkage of 2% in United States consumption and partly because our supplies from duty-free sources somewhat exceeded earlier expectations.

There never was any agreement, gentlemanly or otherwise, between American producers and the Chadbourne Commission in reference to restriction of production in United States possessions, continental or insular. From all our domestic sources of supply we receive less than 60% of the consumptive requirements of this country, and it is perfectly natural, and is to be expected, that the production of duty-free sugar will continue to show some increase while favoured by a protective tariff of two cents per pound on Cubas. The Tariff was framed for the protection and encouragement of the home industry, which it was never intended to hamper in order to aid Cuba or any other foreign producer.

You referred to Porto Rico as "a Spanish centre like Cuba" and seemed surprised that she was allowed to increase her crop. Of course, Porto Rico is a *part of this country*; and, with other sugar countries providing subsidies to protect their home industries, most of which countries produce considerably more sugar than they consume domestically, there is every argument for the United States raising a larger proportion of the sugar that we consume than we now do within our own territorial limits. Cuba and/or other foreign producers will suffer unless the consumption keeps pace with such increased production; but there is no reason why a foreign producer should be favoured at the expense of our own industry. Both Cuba and Java seem destined to further limitation of their export markets, calling for a corresponding reduction in their crops.

Yours very truly,

JAMES S. CONNELL & SON.

Since then sugar has touched such incredibly low levels as 5s. 1½d. c.i.f., equal to a gold parity of 3s. 9¾d., or about 3s. f.o.b. Cuba. What can that island do (or our own planters) with prices at that level?

Sugar Cane Breeding in Java.

Extracts from Mr. Leslie C. Coleman's Report.

THOSE who follow the increased or decreased output of sugar per acre or per ton of cane know canes POJ 100 and even more so POJ 2878 as they do their way home every day. To such students of one of the most interesting of crops ever known—if only because of the uncertainty of where the cane came from and how the varieties became separated from some common parent—the following extract from Mr. Coleman's report will prove interesting; only of course they should be studied in the original. The cane POJ 100, we are told, the only early seedling which was extensively cultivated in Java, did not have the Chunnee cane as a parent but was developed as a cross between a cane (Bandjermasin, Hitam) from Borneo as mother and another (Loethers) from Mauritius as father.

Another line of attack was through the use of Kassver, formerly considered as a wild cane but now believed to be a chance cross between Black Cheribou and *S. spontaneum* (Glagah). It is interesting to note that Dr. P. Posthumus, head of the cane-breeding section at the station (Pasoeroean), looks upon Glagah as very different from the Kans Grass (*S. spontaneum*) found in India. He was not, however, prepared to say whether the differences would warrant the separation of the two forms into distinct species. This cane is immune to the Javanese *Sereh* and yellow stripe diseases, it grows well but has a very low sugar content. The crossing of this cane with POJ 100 yielded a number of promising seedlings, among them being POJ 2364, the mother of POJ 2878, the father being EK 28, the variety which, at the time, was the most widely planted cane in Java. Thus the parentage of POJ 2878 works out as follows:—

Lahaina ♀	}	EK 2 ♂	}	EK 28 ♂	}	POJ 2878
Fiji ♂						
Bandjermasin Hitam (Borneo) ♀	}	POJ 100 ♀	}	POJ 2364 ♀	}	POJ 2878
Loethers (Mauritius) ♂						
Black Cheribou ♀	}	Kassver ♂	}			
Glagah ♂						

♀ Female parent. ♂ Male parent.

This newcomer, it seems, already occupies 98 per cent. of the total area under sugar cane in Java and has led, it is claimed, to an increased production of, approximately, 20 per cent. of sugar per acre.

A very interesting series of observations have been made on the relation between the number of stalks and the production of cane and sugar per unit area. The results obtained during the past three years with POJ 2878 show that the out-turn of both cane and sugar has increased

with the number of stalks up to the highest yet observed. This would seem to indicate that, so far as this variety is concerned, the maximum had not yet been reached. The narrowing of distance between the rows has led to a more regular increase of stalks per acre than a narrowing of distance between the setts in the row. As was to be expected, an increase in the number of stalks per unit area resulted in a decrease in the weight per stalk. Contrary to previous opinion, an increase in the number of stalks did not lead to more lodging of the cane. We have been carrying on in Mysore for a number of years experiments on planting distances, and, while our experiments have been much fewer and less elaborate than those in Java, the results have been very similar.

If we turn to the production of cane and sugar per acre in Java, the most recent figures—those of 1929—gave as the highest production on any estate in Java, 1,610 quintaux of cane and 220 quintaux of sugar per hectare, which corresponds in round figures to 64 tons of cane and 8.8 tons of sugar per acre. The estate which gave this very high return is a comparatively low one with an area of 1,540 acres under cane, but the lowest average yield registered in any estate in Java was very slightly over half that amount, i.e., more than 4 tons of sugar to the acre.

(Continued from p. 70).

Yucatan. His fellow countrymen, judging by the letters and literature received, seem entirely satisfied with the way in which their Governor has tackled and dealt with the serious economic depression that the fall in the price of sisal has cast over the State since he assumed office. It seems to be generally believed that if anyone can pull them through their troubles to best advantage it will be "Our Friend" of this month. If the representatives of the Henequeneros in London, i.e. Sres. Martin de Cossio and his brother, are typical of the men and of the efforts being made to help Yucatan, the planters there are in good hands, whether the troubles caused by low prices can be remedied or counteracted or not. Dr. Harold Mann, who figures so prominently in our book "Sisal," when in London, agreed to call on the Messrs. de Cossio, and it was surprising how these authorities on tropical economics showed how they had studied the question of supply and demand, and through that of prices, particularly with regard to Russia, the United States, and Canada, which they seemed to know as a book. Dr. Mann afterwards thanked us for the introduction, and stated that he had found his visit most useful, having learned a good deal that was new to him as well as being able to confirm and strengthen his own views in many ways.



"Tropical Life" Friend.
No. 322.

H.E. PROFESSOR BARTOLOME GARCIA CORREA,
Governor of the State of Yucatan, Mexico.

WE have pleasure in introducing the present head of the Government of the largest sisal-producing centre, a centre which has exclusively supplied the world with that fibre for about 150 if not for 200 years until fairly recent times, when Germany started plantations in East Africa and our own folks, together with the Dutch and other would-be producers, started to try their luck over sisal as well.

Mexico probably, whatever the state of affairs in her midst was at the time, has been as little affected by the Great War as any country, and Yucatan especially so. One cannot help wondering therefore how the *Henequeneros* fared between 1914 to 1920, and especially during the period when, in this country, the price of sisal was "controlled" at £99 per ton (see "Sisal," p. 153) and other markets were paying *pro rata*. That was the time of course when men, while still at the War, used to call upon us to confirm their hopes and dreams that when peace came they could reap golden harvests from golden sisal for ever and ever. Unfortunately for them, we had been through the Rubber Boom about ten years before, when it was rank heresy to talk of rubber then fetching 12s. 6d. or some such price per lb., as being likely to drop to 2s. 6d. per lb. or less. In both cases, with sisal as with rubber, our visitors would leave in disgust, not so much,

one fancies, because they disbelieved us, as for the reason that we would not believe them, and back up their statements in print if need be. Those indeed were days of sweet dreams, whereas now we are in the midst of days of hard facts, and very hard they are for sisal producers everywhere.

Now, as every reader of *Tropical Life* knows, in our issues of September and October last, we made certain comments on the state of labour according to our information over a number of years—in the sisal areas of Yucatan. These comments caused many "apples" from the "Tree of Truth" to fall upon us, aimed by indignant Yucatecos who, to-day apparently to a man, see Red, and are Red, as regards politics and the treatment of Labour. As already stated, we have as a result, a goodly collection of reports, etc., all bound in red, to prove that life with the Maya and other workers are as described in our last issue.

Those who best know Prof. Garcia Correa speak emphatically of his even, kindly methods of handling those he is in authority over. Of democratic descent, when ascending the social-political ladder, he has not failed at each period of his rise in power to study his fellow man and woman, their aspirations and needs on the one hand, and the needs of Yucatan on the other. Still well under 40 years of age, probably about 35 at the moment, Prof. Correa was born in a quiet unassuming town called Umán, and here by steady application and the will to get on, he studied and worked until he obtained his degree as Professor in Merida, the capital of the State of Yucatan, and then returned to Umán and the neighbourhood to share in the life of his "own folk." This he did to the approval of all, so that they appointed him their delegate to the First Labour Congress organized by the then Chief and Leader of the Socialist Party, Sr. Felipe Carrillo Puerto. At the Congress his personality and knowledge caused him to be elected by a large majority, as Vice-President of the Socialist Party; three years later, in 1927, he was elected Senator for Yucatan in the Federal Congress of the Republic of Mexico, and became one of the leading figures in national politics, although little more than 30 years of age.

All through, "Our Friend," whether one agrees with his politics or not, has remained at the head of affairs, and so long as he occupies that position other countries trading with or selling against Yucatan, will be wise to take note of the hold he has secured on those who have placed him in power, this being the surest means of judging the part that Yucatan, its people and industries, especially its sisal industry, are likely to play in the near future, more particularly so, judging by the course of events since February, 1930, when Professor Garcia Correa became Governor of

(Continued on p. 69).

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Insurance and Motors Overseas.

Advertise and Extend Your Connection.

Two industries in this country that do not make the most of the opportunities they have of pushing their business overseas by carrying on impersonal advertising and educational propaganda abroad are the motor car makers and insurance companies. To rely on local agents is not enough by fifty per cent. What is needed are suitably worded articles, not more than a column in length, telling the public why they need either a passenger or transport motor and then, having driven home to him this important fact, they leave the mad-to-be buyer to study the local papers to see which make is likely to suit him best. This is the way to sell motor vehicles by the dozen, and it is the one way which, so far as our experience goes, the English makers have not made use of. Small wonder, therefore, that one hears of many orders going elsewhere that could and should come to our factories and bring more employment to our people, not motor mechanics only, but many more trades, rubber included, which would benefit all if we could secure as many orders as our cars and lorries, if not our makers, deserve.

As it is with motors so it is with insurance, only more so. We receive regularly a full share of the world's Press one way and another, especially those papers which circulate and are well known in the tropical and sub-tropical centres where we are known. We do not remember seeing insurance propaganda articles published in one of them. In this, it may be that the companies are wise. They should, the same as the motor makers, carry on an impersonal propaganda campaign, financed by a common fund, from the cities where their head office is established, leaving the local papers to tell the local firms and householders which company is likely to suit their needs and cover their risks most thoroughly. When any company wants to get their full share—or perhaps a little over—of the business that our subscribers or the readers of our contemporaries have to offer, they will adopt this plan, and, having made the customers' mouths water, leave it to the local Press to say which lollipop should go into them.

Note the staggering figures that life assurance alone has reached in America. Were the \$20,000,000,000 that Uncle Sam's companies are said to have invested obtained without much educational and propaganda work? We are quite sure not. Neither have they been gained by folders and notices *plus* pestering callers who always appear when you are least able or willing to read the first and learn from the second. Let the big companies, however, band together and "Tell the Empire" by means of short, crisp,

truthful articles which can be read, studied and remembered at leisure why and how they can assure lives or properties. Then, but not until then, shall we run the chance of equalling America's insurance and even—given perseverance and luck—leave it behind. Let our motor companies and insurance offices each meet together and discuss the plans for carrying out such campaigns for a period of at least three, or better still for a minimum of five years, and see if they do not agree that our plan will succeed. As one of the evening papers pointed out the other day, the U.K. and the British Empire generally are not slow to avail themselves of the advantages of insurance, but they are slow at realising its advantages, or, we feel, it is the companies that are very slow at teaching the public to realise and appreciate the advantages offered them.

Those who in their narrow minds wish to denounce and check lotteries run with discretion (one can, we all know, have too much of a good thing, and lotteries, being a good thing, we can have too much of them) must remember how anxious the public is to invest its money in some form of Tontine system of insurance, whereby all subscribe and one only, the longest life or the luckiest generally, scoops the pool. This being so, the way everyone but the Head of the Police and the fanatics in this country and Empire are hurrying to insure themselves in the Tontine Draw in Ireland goes to prove how anxious we are, if properly approached, to invest our money in any form of insurance that appeals to us as being fair to all, even when we know that only a few can benefit by it.

Major Georgi was discussing Malayan Palm Kernels in the *Malayan Agricultural Journal* for February, and with the growing importance of palm kernels over there on account of the development of the oil-palm industry generally, shippers of kernels from elsewhere should note that the quantities exported from Malaya are likely to increase considerably. The estates are also discussing the installation of machinery for extracting the kernels. On the other hand one feels that the oil as in West Africa will, until new inventions come along, be extracted at consuming centres. Queries are raised as to why Malayan palm kernels realize a slightly lower price on the European market, compared with their West African rivals. Might this not be due to the smaller quantities tendered, to a new product which always has to be tried out and become accustomed to, and thirdly, perhaps more important still, to the less certainty that supplies such as they are will come along regularly. In 1930 the export of kernels from Malaya are returned as having been 500 tons, against perhaps 500,000 tons from West Africa.

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Tropical Life.

APRIL, 1932.

Sisal Restriction.—No. 2.

Is it so Impossible?

(See also p. 52 in our March issue.)

OUR popular but surely, in this case, somewhat pessimistic contemporary, *East Africa*, devoted the first column of p. 708 of its issue of March 17 to belittling our plea for consideration of the advantages of some form of restriction with regard to the output of sisal and at the same time of developing an organized plan of campaign between all producers with regard to its sale. We suggested this, not in the belief that the growers would thereby secure more than their fair proportion of the profits to be made between the fields and the retailers of the finished article, but in order to prevent the producers from starving and the retailers from suffering through irregular and restricted supplies owing to protected areas being able to dominate the markets. We still claim that unsatisfactory as the state of the sisal market is to-day, yet, in spite of our 10% duty against foreign sisal, this duty will not prevent over-production and through that the sale of sisal "in distress." Such sales will pull down prices and upset the trade until it is no better, if it does not become worse, than it is to-day. Because, at last, this country has come to its senses, and has put on a protective tariff on sisal and other fibres, that will not prevent other countries competing against us at a lower ratio of profit or a larger ratio of loss. Again, unless the tariff raises the price of sisal, how can it benefit the growers? If it raises it only 1s. 6d. a cwt. or 30s. a ton, should over-production continue at the present rate, that difference may not keep either non-British sisal or the foreign twine, etc., made from sisal, out of the Empire. Advance the duty still higher, and you will probably see a reaction is stirred up and the present 10% even is lost. But why run such risks? There is enough sisal, and more than enough, to satisfy the present need of the world. Again, who can guarantee that the present volume of demand can be maintained, whilst we know that the present production not only wants to remain but to increase, especially with America pushing on new areas? It is already threatened. Are we therefore to hide our heads in the sands of oblivion until the storm bursts and we find that we cannot get out, whilst the less foolish ones regain their legs and get to work again with comparative ease.

What do the growers everywhere really want? Is it not a reasonable profit on their crop year by year; of a crop, too, that can easily and inexpensively be curtailed by destroying the

leaves if needs be, and by cutting and sending to market only such fibre as the market calls for, say at a price like £20 per ton against a cost of £15 to £18 according to locality? These prices, some may say, are too low. Very well, put the cost at £20 and the sale price c.i.f. at £25. Then say which would you rather; arrange for the sisal world to produce 300,000 tons (more or less) that the demand can absorb, and make £5 a ton profit, or increase to 400,000, if not 450,000, tons and lose £5 a ton (more or less) by so doing. Can this country claim to be immune from such a risk because of our protective policy? Surely not.

How much sisal does British East Africa want to produce? Let us say up to 100,000 tons and then stop. That is equal to Mexico's production in 1929, but not to her easily possible output. We, with our Empire and protective duty, can rank equal to Mexico in its ability to thwart our progress by low prices. Leaving Java to take care of itself—it can well do so—why not join forces with Mexico as a start and agree not to produce more than 200,000 tons between us? Until we reach six figures, Mexico can make up the difference. When we run equal, then we can serve the Empire, and Mexico and Java the rest of the world. Should a radical change come over sisal—those in the trade know quite well to what we refer—then we must cut back supplies *pro rata*. Meanwhile, for many reasons, do let us agree to cut back (increase if needs be) whilst we can do so by agreement, without waiting for necessity to hammer at our doors and forcing us to do so after good money has been lost.

Of course, if this country can look for a 25% or, with luck, a 33½% protective tariff so as to make the world-basic price, now £15 (which nothing will alter unless the world consumption increases or outputs shrink), increase for British sisal at the latter rate (33½%) to £20, that would be a different story. But can such a dream come true in this age and country?

There are hopeful ones, it seems, who believe that any tariff is possible, even a 50% one if needs be. There is reason in such an idea, especially if the percentage be on a sliding scale up or down as the year's (or half-year's) average rises or falls. Suppose we talk of 1% off the duty for every £1 increase in price above £15 or whatever the world price is at the start. If the average at the end of 1933 works out at £20, being a £5 rise (on the non-British price) then 5% comes off the tariff for 1934 and puts it at 45% only. If it was decided to knock off 10% per £ rise, then the 1934 tariff would be 40%. Or, in the event of a miracle, if the present world price of £15 rose to £65, then with the 1% reduction per £ increase in price, brought into play, there would be no protection at all until values dropped again. The above percentage has been chosen for easy calculation, whether the tariff becomes 25%, 33½% or 50%, the principle can be the

same. A 10% tariff, however, is nothing at all, with outputs as they are to-day. This is why we claim that restriction must come into force.

Where Cocoa Fails.

News from Ecuador.

(From a Correspondent.)

THE report dated January 31 on the exports and prices of Ecuador cocoa issued by the Ultramares Ecuador Trading Co. shows the irregularity of the output of the cocoa from Guayaquil. Probably all cocoas are the same, but that makes no difference so far as Ecuador is concerned. I hope before long to have the figures, year by year, for 1922 to 1931, for the completed twelve monthly exports, and then our readers can see exactly how the shipments have moved up and down. In the present table, January, 1928, is the lowest month, with 20,696 quintaux (46 kilos), against 66,956 in 1924, and 30,377 quintaux for this January. Take the eleven years together, the average export works out at 38,545 quintaux for January.

What strikes one as rather peculiar is their trouble to give reliable estimates after March (1932). Evidently lack of the proper plant foods and of cultivation and general attention are all leaving their mark on the cocoa. For neither the witch-broom, the pod disease or other trouble would cause a paragraph like the following to be included in a report: "The quality of the present supply is only fair," we are told, "and it is remarkable that the size of the beans apparently has become smaller. We believe there is not one plantation in Ecuador which has conserved its former conditions of ten or fifteen years ago. Some have suffered less, having been protected and worked on better lines. This costs the owners more money and they claim therefore that they should get a better price. This claim is fully justified, and in order to help the owners of such estates all contracts made should be based on a certain definition of quality. . . . Cocoa beans, of course, are a product of Nature, and can only be influenced by human labour to a certain degree. If this labour is applied it must be appreciated by the buyers to a due degree, i.e., the cocoa must realize higher prices."

It is always an advantage to have a good opinion of oneself. In the following case one would ask, is the claim justified? "For making desiccated coconut the Philippines, perhaps, have the best mills in the world. Their quantity production was 16,086 tons (metric) last year, against 19,900 tons in 1930, showing a drop of 19·2%."—Leo Schnurmacher, Inc., in the *Journal* of the American Chamber of Commerce, Manila, "On the other hand, 163,501 metric tons of oil were exported (all but 15,529 tons to America), against 147,751 tons in 1930."

MARKET REPORTS, GOSSIP AND PRICES.

THIS issue, as most of our readers have noticed by now, contains much that has to do with sisal. At the moment this article, like the market to which it has given a being, wants every attention if all is to go well with it. On p. 64 will be seen a paragraph urging that, when centrifugals are used for drying sisal or other fibres, the larger, if not the largest size, be used as, unless this is done, satisfaction cannot be looked for.

On Thursday, March 17, the Bank of England again took London by surprise by dropping the Bank Rate for the third time; now it is a further half per cent., i.e. to $3\frac{1}{2}$ per cent. from 4 per cent., to which it had in turn been lowered just a month previous, first from 6 per cent. and then 5 per cent. This further drop was hoped for and even expected but, as with the 4 per cent. rate, it came in the end with unexpected suddenness. As the banks now will only be allowing $1\frac{1}{2}$ per cent. on deposits, this surely will cause considerable withdrawals of such monies to the advantage of business generally.

In face of all one has been hearing of the slump in diamonds, it is worth noting that in their monthly report for March, Barclays D.C.O. Bank tells us that the sales of South African diamonds last year totalled £3,291,949, which worked out at an average price of £2 3s. 2d. per carat. The average annual value of the diamonds sold during the past ten years works out at £8,250,120. This shows the falling off in the world's will and ability to buy absolute luxuries.

The recent sudden rise in sterling has affected most products looking to this country for at least a part of their sales. Fluctuations caused by rises and reactions have been the result. With Egyptian cotton, for instance, the improvement in sterling caused a rush of selling and a drop in values followed which was partly recovered, but the fall was sufficient to bring the (Egyptian) cotton into competitive ratio with America, and this resulted in some brisk selling. The same fluctuations, a gradual rise and a sharp reaction, later recovered, also affected the cotton seed.

The same report (Barclays D.C.O.) speaks of over 2,500,000 cases of oranges as having been exported this crop (to March 9) from Palestine, say 500,000 to the Continent and 2,000,000 cases to the U.K., at prices around 15s. in this country against 25s. and over for the grapefruit.

Turning to America, the March *Review* of the Westminster Bank rightly points out how it is certain that the world cannot regain healthy conditions until the American position is sound.

... The economic recession of the past two and a half years has been far more severe in America than in Great Britain. Take their local banking system. Even in 1928, a year of pros-

perity, 491 banks with deposits of \$138,000,000 suspended payments. From the beginning of 1930 to the end of 1931, the number of suspensions came to 3,643 banks with total deposits of \$2,556,000,000, and in January, 1932 (this year), the average deposits of failed banks amounted to \$825,000, against \$283,000 in 1928 and \$365,000 in 1929. Meanwhile the U.S. Government is straining to balance their Budget, but it seems much more of a task even than ours has been. What strange things do happen in these days. A country has mountains of gold and yet "outsteps the constable." Why are such things possible?

Moving on to our usual market gossip we come to:—

Rubber.

According to published statements the British and Netherlands Governments have been consulting the Governments of Ceylon, Malaya, and the Netherlands Indies. After a careful review of the situation the two Governments have been forced to the conclusion that, under the present conditions, it is impossible to frame and operate an international scheme which would guarantee the effective regulation of the production or export of rubber.

In connection with the statement respecting the breakdown of the rubber production negotiations, it is reported at The Hague (so the *Times* tells us) that as many as 140 schemes for restriction were received, 44 of which were carefully studied. The best chance was offered by the so-called "quota" plan, which was taken into consideration by the Dutch Government.

The general idea is that the industry will have to work out its own salvation without the least prospect of limitation of production. In plain English, all but the strongest will be starved out and the others must drag along in an emaciated condition, hoping to have the strength to build up their fortunes again when enough of their competitors have fallen by the way or are too weak to help over-supply the market. What a policy! Why has it been advanced? Merely to please the Dutch natives at the expense of millions of good money and good men's well-being. "The greatest stumbling block," we are asked to believe, "is the native producers of rubber in the Dutch East Indies." No wonder a price of under 2d. was mentioned on the day that the above decision became generally known. What else could anyone expect?

In these days when the best men at their work risk and often lose their lives to break all records, when it comes to doing so with rubber or other commodities, it certainly is not one's own life that you feel disposed to take. Probably it is a

good thing that one is not sure whose existence should be ended for causing so much worry, anxiety and financial loss. With rubber at under 2d. lb. or less than 1½d. lb. on a sterling basis, one hopes that the "last straw" has been reached, for surely at that rate many backs have been broken, so it is time that a change was made. One report on the position is, however, comforting, for it claims that surely at the above rate the Dutch native output must drop off, for, as with recent quotations for Cuba sugar, even the cost of transport must eat a big hole in such small values.

Moving on to prices and quotations, Messrs. Lloyd, Matheson and Carritt quoted as under on March 23, immediately after the Easter Holidays:—

SPOT QUOTATIONS—	1932 MAR. 23RD		1932 MAR. 16TH		1932 MAR. 9TH		1931 MAR. 25TH	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	11½	0	2½	0	2½	0	3½
Crepe (F.A.Q.)	0	2½	0	3	0	3	0	3½

FORWARD POSITIONS—	MAR. 23RD		MAR. 16TH	
	SMOKED SHEET	CREPE	SMOKED SHEET	CREPE
	s.	d.	s.	d.
1932, March	0	11½	0	2½
„ April/June	0	11½	0	2½
„ July/September	0	2½	0	2½
„ October/December	0	2½	0	2½

STOCK—	1932 TONS		1931 TONS	
	London, Week ending, Mar. 19th	65,014	Liverpool „ „	48,333
Total		125,936		131,465

SINGAPORE QUOTATIONS—

Mar. 23rd.—Spot, 6¼ cents, April/June, 1932, 6½ cents; July/September, 1932, 6¾ cents.

Mar. 16th.—Spot, 6¾ cents, April/June, 1932, 7 cents; July/September, 1932, 7½ cents.

Balata.

This remains quiet with West Indian on the spot quoted at 1s. 8d. lb. for sheet, against 1s. 6d. c.i.f. sellers for shipment. Venezuelan block is worth 10d. on the spot and 9d. nominal on c.i.f. terms. Against 3d. to 4d. nominal for Iquitos, sellers of Panama balata are quoting no price without offers.

Cotton.

This article has already been referred to in the general notes of this section a little way back, but now (quoting the *Review* of the Westminster Bank) one hopes a further drop in the Bank Rate will again help prices to remain firm, Egyptian cotton especially, since it has not (unless recently) spurted to the same extent as American. If the Chinese and Japanese can come to terms, China at least should be a steady buyer of cotton. On the other hand, non-Japanese traders in Northern India have been doing well, thanks to the closing of the Japanese mills in Shanghai. If hostilities cease these mills will be restarting again and the trade probably will drift back to them. It seems to be noteworthy that, on the whole, trade has

been less disturbed than the Press reports would have you believe. Where Shanghai has lost, Hong Kong seems to have gained, and even Shanghai all through did a large scale trade, according to the latest reports.

Coming to the raw material, according to *Cotton* of Manchester, the world's visible supply of raw cotton continues to shrink with an excess of exports over last year to date of 1,000,000 bales, making the total forwardings to the mills of the world amount to 1,800,000 bales over last season. In Manchester itself, March 18 found the market uncertain what to expect for several reasons and anxious less another rise in sterling should bring about a further fall in prices. With regard to the area and crop in India, *Cotton* reports that the total area now spoken of amounts to 23,511,000 acres, as against 23,500,000 acres, the revised estimate at this date last year. The total estimated yield now stands at 4,002,000 bales of 400 lbs. each, as compared with 5,110,000 bales (revised) at the corresponding date of last year, or a decrease of 22 per cent.

Moving on to prices, the following were the official "spot" prices in Liverpool on March 18 and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5·51*	5·51*	5·90*	8·23*	6·99†
Strict Middling American	5·58*	5·58*	6·05*	8·53*	7·09†
Fair Pernam	5·58	5·58	6·05	7·83	7·35
F.G.F. Sakel. Egyptian	7·45	7·40	9·65	13·70	9·95§
Fine Broach	5·19	5·23	4·69	6·10	6½
Fine No. 1 Oomra	5·00	5·04	4·29	5·60	6½
Fine Bengal	4·55	4·59	3·99	4·20	5½

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Vegetable Oils (London and Liverpool).

Palm-oil, according to reports from Liverpool, is dull, with Lagos quoted at £17 15s. for April-May, against even money (£17) for Softs as well as for Red Sherbro and Mediums.

Of oil-cake there is not much to say. The market for linseed cake remains firm at prices ranging from £7 5s. for Indian and Spanish duty paid up to £8 2s. 6d. for London made ex-mill. Cotton cake is quiet at £5 to £5 2s. 6d. ex-mill for London made and £4 7s. 6d. to £4 8s. 9d. ex-ship for Egyptian. Coconut cake is quoted at £7 5s. ex-mill for British, against £8 2s. 6d. ex-mill for Soya bean cake. Soya meal ex-mill is quoted at £8 5s.

COPRA PER TON.

	CEYLON F.M.S.		JAVA F.M.S.		STRAITS F.M.S.		PHILIPPINES F.M.S.		SOUTH SEAS F.M.S.	
Mar.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
23	18	5 0	16	12 6	16	10 0	15	12 6	15	15 0
19	18	5 0	16	12 6	16	10 0	15	12 6	15	15 0
16	18	10 0	16	17 6	16	15 0	15	17 6	16	0 0
12	18	10 0	16	17 6	16	15 0	15	12 6	16	0 0
9	19	0 0	17	0 0	17	5 0	16	7 6	16	12 6

Malabar copra, f.m.g.w.s. £ N/Q. Rabaul Plantation £15 2s. 6d. f.m.s. on March 23rd.

COCONUT OIL PER TON.

Ceylon mill oil on March 23 was quoted at £29 15s for spot parcels, against £27 10s. (cylinders) for shipment English deodorized in barrels is worth £36 10s.

OTHER OILS PER TON.

Mar.	CASTOR		GROUNDNUT		COTTONSEED CRUDE		LINSEED		SOYA BEAN SPOT, NAKED		PALM KERNEL OIL†	
	FIRSTS	CRUDE*	CRUDE*	EGYPT	SPOT†	SPOT†	SPOT†	SPOT†	SPOT†	SPOT†	SPOT†	SPOT†
23	£ 42 10	£ 40 0	£ 21 10	£ 14 5 0	£ 25 10 0	£ 24 0						
19	42 10	40 0	22 0	15 0 0	25 10 0	24 10						
16	42 10	40 10	22 0	15 10 0	25 10 0	24 10						
12	43 10	40 10	23 0	16 10 0	25 10 0	24 10						
9	43 10	40 10	23 0	16 10 0	25 10 0	24 0						

Soya Bean Oil. Oriental to the Continent, March-April is quoted £19 10s. in bulk.

* Crude, naked.

† Net, naked, ex-mill.

‡ At Hull.

SEEDS PER TON.

Mar.	LINSEED (AT HULL)		COTTONSEED		SOYA BEAN		GROUND- NUTS		MANCH AFLOAT	
	CALCUTTA	LA PLATA	EGYPT BLACK	CASTOR BOMBAY	EGYPT BLACK	CASTOR BOMBAY	EGYPT BLACK	CASTOR BOMBAY	EGYPT BLACK	CASTOR BOMBAY
23	£ 10 15 0	£ 8 5 0	£ 6 6 3	£ 12 15 0	£ 17 0 0	£ 6 18 9				
19	11 0 0	8 10 0	6 8 9	13 0 0	17 11 3	7 5 0				
16	11 5 0	8 11 3	6 8 9	13 2 6	17 5 0	7 10 0				
12	11 5 0	8 13 9	6 11 3	13 15 0	17 15 0	7 13 9				
9	11 5 0	8 16 3	6 12 6	13 15 0	18 3 9	7 13 9				

Desiccated Coconut.

This article is quiet but steady. On the spot it is quoted at 28s. 6d. and Medium 29s. 6d., against 25s. c.i.f. for March-April shipment.

Coffee.

First let us acknowledge with thanks receipt of a report on "The Coffee Industry of Colombia," being Trade Promotion Series No. 127 (illustrated), 31pp., price 15 cts., published by the U.S. Department of Commerce, Food-stuffs Division. Colombia can produce coffee quite perfect in flavour; whether it does so to any great extent we cannot say. If, as we are told in the "Foreword," about 90 per cent. of Colombia's coffee exported (her production is considerably more than 3,000,000 bags) goes to America, one feels this description is not a general one because, although his taste is improving, Uncle Sam goes for quantity, not quality. When quality comes to market, then this country and Germany are the buyers.

In the calendar year 1930, the quantities of coffee exported to foreign markets (the "Foreword" tells us) from the four largest producing countries were: Brazil, 15,288,000 bags of 60 kilos, or about 132lb., Colombia (the world's largest producer of "milds," say more than one-fourth of the total output), 3,173,000 bags, N.E.I., 1,037,000, and Venezuela 1,022,000 bags.

Coffee planters elsewhere will note that, in Colombia, the coffee is produced at varying altitudes, say between 3,000 to 6,500 feet as a rule. Their ideal temperature ranges from 65° to 75° F. It is the fertile soil of the Andes on which the coffee is produced. This soil is partly

of volcanic origin and formed by the disintegration of vegetation and the rocks throughout centuries. Does much erosion of soil take place, one wonders. What is the difference in climate, soil, and in every way, between the mountain coffee of Jamaica which has grumbled at 220s. as a price, and these mountain areas of Colombia? In Jamaica, we have been told, soil erosion is depleting these choice coffee areas of their soil to a disquieting extent. Can nothing alter that? Can Colombia ever hope to put mountain coffee on the market to realize Jamaica's top values in price? That is all we can say now, except to report that on p. 19 will be found particulars of the National Federation of Coffee Growers of Colombia, organized in 1927, and which started work in 1928. The Coffee Congresses of Colombia (p. 23) are highly important, both to Colombia and to coffee planters generally; therefore they should know about them. Pages 25-31 are devoted to statistics. There is an excellent map of the coffee routes from estates and districts to the shipping ports.

Coming to the London market news, we have to state that during the week ending March 19 rather more coffee was offered which met with a good demand at full prices for fine qualities, whilst the lower grades did not do so well. Among the prices paid were the following ex three sets of auctions:—

Kenya.—Smalls, 72s. to 83s. 6d., 69s. 6d. to 79s. 6d., 62s. 6d. to 80s.; seconds, 87s. 6d. to 108s., 79s. to 96s., 78s. to 100s. 6d.; bold fair, greyish and greenish, 104s. to 111s., bold common, 86s. and 91s. to 100s.; fair, 106s. to 116s., 104s. to 117s.; good, 126s., 114s. to 124s. 6d., 120s. 6d.; peaberry, 103s. to 116s., 96s. to 115s., 95s. to 122s. 6d.

Toro.—Bold greyish and greenish, 83s. 6d., seconds, 70s.

Tanganyika.—Bold common, 80s., seconds 69s., peaberry, 79s.

Of East India kinds:—

Mysore realised 123s. 6d. to 149s. for bold good to fine greyish and greenish; 108s. to 118s. for bold medium, 82s. to 96s. 6d. for medium, and 129s. 6d. to 148s. 6d. for peaberry

Coorg sold at 118s. 6d. for bold greenish, 98s. 6d. for medium, 86s. 6d. for small, and 114s. to 114s. 6d. for peaberry.

Costa Rica had a *Fiesta* and did well, both in quantities sold and prices obtained, say, smalls, 59s. to 61s.; seconds, 72s. to 111s.; bold common greenish, 100s. to 108s.; fair, 110s. to 122s.; good, 123s. 6d. to 133s. 6d.; fine, 138s. 6d. to 141s. 6d., and 140s. to 148s.; peaberry, 90s. to 146s. 6d. and 99s. to 151s.

Other Products.

Coming to the more general market reports, we will start by quoting the *Times* of March 21,

which tells us that the recovery which has taken place of late weeks in shares of Indian and Ceylon tea planting companies, the heavy deliveries reported in February, and the exceptionally large offerings of Dutch teas at the Mincing Lane auctions have alike been caused by the expectation that in the forthcoming Budget the Government will reimpose a duty on tea and grant a preference to Empire-grown over foreign tea. Offerings of Java tea have recently been on an unprecedented scale, the heavy fall in prices having been aggravated by the increased competition from these teas. The large amount of newly planted areas in Java renders it certain that the Indian industry will be a still heavier sufferer in the future from this cause unless a preference can be restored to the British-grown product. Indian tea-growers do not, of course, contend that prosperity would be restored to their industry by putting a duty on the import of tea, but they believe that, given a reasonable preference for Empire teas, the adverse effect of the rapid increase in Java's production on the Indian industry will be lessened.

At the public sales recently sellers found the competition quieter for Indian teas, although parcels of fine teas realised steady prices. With Ceylons there was a good demand at full to firmer levels for parcels showing improved quality. Java and Sumatra lots enjoyed a fairly good demand at unchanged values.

Moving on to fibres, one cannot help remarking a somewhat damping paragraph in Messrs. Wigglesworth's report of March 17, which claims that the new 10% duty on British fibres will be welcomed by growers if it adds substantially to our consumption and thus contributes to a rise in price from the present disastrously low level, but the question must be viewed from many angles and the placing of a duty on Manila which constitutes an important article for a country whose maritime industry is of supreme importance, may seriously curtail the export of rope.

Elsewhere, however, the report claims that it is safe to predict an impetus to the movement, which has met with so much success in the substitution of African sisal for various types of ropes, cords, &c., for which Manila hemp and other fibres have hitherto been used.

It is hoped by this means to relieve hardships and to put a check on the closing down of sisal estates in East Africa, a move that has been spreading as a result of the uneconomic prices ruling for the past year or two and which is manifesting itself in the smaller volume of shipments.

A firm market was maintained for a period and it was pleasing to note the improvement in demand from U.K. spinners in covering their requirements ahead for African sisal on an increasing scale. A lowering of prices with a certain pressure to sell on the part of the Java shippers, however, eventually brought about an

easier tendency in African so that prices are down again to the low level of a month ago. A surprising feature is the continued absence of demand from the U.S.A. not only for immediate crop requirements, but an almost complete lack of interest in future supplies. With a distinct sign of improvement in general world conditions the opportunity of covering ahead at prices so attractive as they are to-day cannot remain long open.

Meanwhile both No. 1 East African sisal and the Mexican product remain at or rather below the old level of £14 10s. to £15 per ton c.i.f., whilst with Manila fibre, the Philippine shippers and dealers are said to be holding tenaciously to their ideas as to values and were encouraged to do so by the large purchases by the Japanese. If this nation does make peace with China, will such wholesale buying of Manila still continue? We raise this query, answering it at the same time by saying that whilst the Americans remain aloof, it is feared that although Japan has taken, so far this year, some 87,000 bales, against 39,000 bales to the U.S.A. and 63,000 bales to Europe, this demand will fall away now that the Eastern troubles appear near a settlement.

At the moment (March 22) J No. 2 Manila fibre is priced at £19, against £20 5s. in February and £18 15s. in January; whilst K is worth £18, against £19 10s. and £17 15s.; and M No. 1 £17, against £18 5s. and £17 in January. Sisal remains as above.

Moving along, we come to Shellac, which is dull so far as spot business is concerned. TN is quoted 65s., Fine Orange 80s. to 160s.; AC Garnet 72s. 6d., and RLI button 85s., against 70s., 80s. to 160s., 77s. 6d. and 90s. respectively a month ago. Palm kernels are lower again at £11 10s. to Hamburg, against £13 17s. 6d. in February and £11 17s. 6d. in January. Tin is down about £9, compared with mid-February, say, £131 or a little less for spot cash, against £140 2s. 6d. last month. The market is quiet but irregular and subject to small fluctuations. Copper is also subject to small fluctuations and ends by being about £5 lower at £33 12s. 6d., against £38 10s. before.

Coming to finance, yet another drop in our Bank rate has to be reported; now it is $3\frac{1}{2}\%$, with the Swiss Banks still at 2%, Paris $2\frac{1}{2}\%$, New York at 3% instead of $3\frac{1}{2}\%$, Amsterdam unchanged at 3%, Brussels still at $3\frac{1}{2}\%$, Milan unchanged at 7%, but Berlin is at 6% instead of 7%. Gold recently dropped to 112s. 10d. and silver to $17\frac{1}{8}$ d. per oz. This makes our table work out thus:—

MARCH 21st	1932	1931	1930
Bank rate	$3\frac{1}{2}$ per cent.	3 per cent.	$3\frac{1}{2}$ per cent.
Consols $2\frac{1}{2}$ p.c	60 $\frac{1}{2}$	56 $\frac{1}{2}$	56
Bar silver per oz.	17 $\frac{1}{8}$ d.	13 $\frac{3}{4}$ d.	19 $\frac{3}{4}$ d.
Exch. on New York	\$3.65	\$4.85	\$4.86 $\frac{1}{8}$

THE WORLD'S COCOA MARKET.

An Organised Seller—Our Big Consumption—Russia.

BY THE CONTROLLING EDITOR

PRODUCERS of cocoa everywhere will be well advised to watch the markets generally, both those which receive and distribute the raw material as well as those which produce it. Will America, for instance, turn once more to British West Africa or, as she did throughout 1931, allow Bahia to lead again with other increases (see *Tropical Life* for February, p. 38), by not buying enough to enable the Gold Coast, in spite of her huge output, to head the list? On the other hand, if you bulk the three West African growths, Gold Coast, Nigeria, and the Ivory Coast, you will find that Uncle Sam last year received 1,165,716 bags from these (three) centres, against 1,009,825 bags in 1930. So far as the Gold Coast is concerned, however, it will do her producers no good if her neighbours shoot ahead and leave her behind; furthermore, it will do cocoa generally no good if America side-tracks Accras sufficiently to cause that growth to press sales elsewhere to a degree that will drag down values just when they show some signs of improving. For this reason alone, whilst, quite naturally, each producing centre wants all the plums, they must realize how much it is to their interest not to have the world's markets flooded (comparatively speaking) with Accra and Gold Coast cocoa which Uncle Sam either does not need or will not allow to pass through.

How to Manage It.

Last month we referred to the useful remarks Mr. K. Walter made at the Royal Society of Arts, following Mr. Freeman's paper on "Empire Fruit" (see p. 49). Since then it was suggested to one of the few private sisal estate owners in Kenya that he should get into touch with Mr. Walter and see if something could not be done to organize the production, sale, and final distribution of sisal during the troublesome time through which that industry is passing. To-day Mr. Walter, through the Horace Plunket Foundation (10, Doughty Street, W.C.1), can well be described as the "Doughty Champion," for advice *re* organizing the distribution of crops of every kind produced and consumed within the Empire. It is difficult to visualise, therefore, anyone better able to advise our cocoa producers how to protect and advance their interests without interfering too much with the old-established trading and buying firms whilst doing so. Most of our readers will be suprised, if they do approach the Foundation, when they learn what a leading part it has already played in West

Africa, the West Indies and elsewhere along the lines suggested. In a future issue we hope to be able to say something more definite on the matter. This, however, will not be the first time that the question of organizing the sales and advertising the distribution of cocoa crop, particularly of Empire producers, has been urged, for the writer discussed the matter at one of a series of meetings, i.e. a conference on the co-operative and organized handling of wheat and other crops which took place at Wembley in 1924, that particular meeting being on the afternoon of the very day that the so-called Cocoa Congress was terminating its proceedings. On the principle of being "Third Time Lucky," one likes to think that if we can bring up this matter for a third time, permanent benefit to the producers will result. If it does not, we shall at least have tried our best. This year would be an ideal one to make a start, as both Bahia and West Africa seem to be running high in their outputs, and although the big manufacturers seem to be doing their share to help, if one growth gets side-tracked for a bit it will be certain to affect all growths more or less, as the strenuous effort of the one producer to secure his spot in the sun tends to knock down (the price of) all, like the Little Wooden Soldiers in Balieff's picturesque and amusing little song.

Where Consumption Looks Well.

Whatever luck other centres are meeting with, the deliveries for Consumption, and so, one hopes, the actual Consumption in this country, have done wondrously well during January and February. May such figures continue to run throughout the year. One finds it difficult to believe that the figures are correct. It is almost as good as winning a £100 prize in the Irish Sweep. During February only, we delivered 6,639 tons for H.C., against 3,808 last year and 3,669 tons in 1930. This makes the two months' totals work out as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY—FEBRUARY.

RAW COCOA ONLY	LANDED	INCL. B.W.A.	DEL'D. H.C.	EXPORT	STOCK END OF FEB.
JAN.	TONS	TONS	TONS	TONS	TONS
1930	27,113	24,812	8,330	371	49,050
1931	19,326	17,520	9,143	784	37,150
1932	28,659	26,847	14,378	565	42,650

Inc. 9,333 Inc. 9,327 Inc. 5,235 Dec. 219 Inc. 5,500

America's Call for Bahia Cocoa.

The usual Annual Table of exports from Messrs. Corrêa Ribeiro & Co. of Bahia, shows that out of 1,205,471 bags exported from January—December last year, the U.S.A., i.e. New York, San Francisco, Philadelphia, Boston and Los Angeles, received exactly two-thirds, viz., 803,744 bags, to say nothing of any Bahia she enticed from Germany (to where 93,000 bags were consigned), or elsewhere. In the February issue, quoting Messrs. Marcone's list, Uncle Sam is credited with having received 839,825 bags, so he obtained about 35,000 bags from elsewhere. At times, of course, the difference in the statistics between the country that exports to a given date, in this case December 31, and those returns of the country receiving the cocoa to the same date can be very marked, but with the Bahias this has not been so to any extent so far as last year is concerned. Messrs. Lee & Co. returned America as having received 858,836 bags of Bahia last year, against Messrs. Marcone's 839,825 bags, as compared with Corrêa Ribeiro's figures for the quantity consigned there.

If Uncle Sam had taken two-thirds of the Gold Coast crop, he would have received at least 150,000 tons or, at 16 bags to the ton, 2,400,000 bags, that is to say, very nearly as much as her total imports (2,446,700 tons) in 1930. The Empire does not expect Uncle Sam to favour us to such an extent, but one cannot help wondering why our Colony, which America has been only too glad to draw upon in the past, has not done better lately. Is it, as has already been suggested, that Uncle Sam has a fear that he may be "cornered" by the Gold Coast? If there is a grain of truth in such a claim, one cannot help feeling that Uncle Sam underestimates his own strength. Meanwhile, the fact remains only too apparent that the Gold Coast last year did not have that full share of support from America that she (the G.C.C.) has held in the past. On the other hand, can it be taken as a sign of repentance that, during January-February of this year, out of her total imports of 696,707 bags, America included 385,843 Accra kinds, 52,105 Lagos and no Ivory Coast cocoa, against a total import of 455,659 bags last year, including 70,526 Accras, 77,831 Lagos (thus beating the Gold Coast), and 54,697 bags from the Ivory Coast.

The Question of Russia.

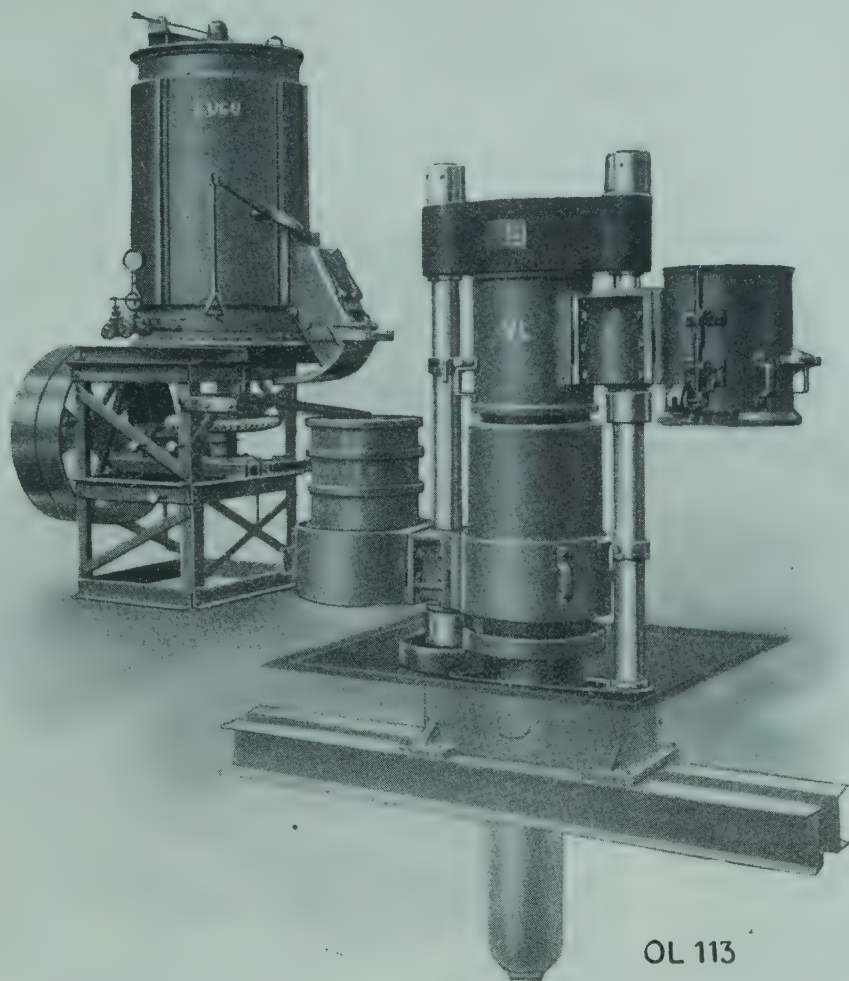
Our weekly contemporary, *The Confectionery Journal*, started its Cocoa Market report of March 17 with a good deal to say about the future of Russia in many ways, but more particularly as a producer of sugar on a large scale, as a buyer of raw cocoa and also as a shipper of confectionery (and many other goods) at almost any price that will bring her in hard cash. Next month probably, we shall again refer to this

same menace (for even as a buyer of raw cocoa Russia does not promise to help the world trade of the manufactured article), so nothing more need be said here except to urge planters, even those in the backwoods, to secure weekly, certainly monthly, papers of a reliable nature, and through them ascertain how Russia is treating the world and what the world is doing to and thinking of Russia in return. Each article one reads, written by known men, seems inclined flatly to contradict the statements in a previous one. Truly does it seem a case of Jekyll and Hyde according to whether a Conservative, or a Labour and Communist is behind what is said: all the cocoa planter wants to know, however, is (1) Will Russia buy raw cocoa to a noticeable degree in the near future? and (2) If she does, what proportion of the manufactured article is she likely to be allowed to dump on other countries, especially in the U.K., and spoil legitimate traders' business in every way by so doing?

America takes more Gold Coast.

Messrs. Marcone & Co's returns of the imports into America (Atlantic ports, i.e. New York, Boston and Philadelphia) show that this year during January-February 696,707 bags were received, of which 385,843 were from the Gold Coast, 52,105 from Lagos, and none from the French Ivory Coast, whilst Bahia sent 154,693 bags and Sanchez 28,128. Last year the total for the two months came to 455,659 bags, to which the French Ivory Coast contributed 54,697 bags, the Gold Coast 70,526, and Lagos 77,831 bags (rather more than the Gold Coast), against 135,992 from Bahia and 26,762 from Sanchez. With liberal supplies generally yet to come from Bahia and the Gold Coast, it remains to be seen whether diplomacy can push these off on to the world to absorb without undue pressure or anxiety. If this can be done the present firmness apparent should be maintained.

Before going on to prices, will those of our readers who are likely to be in London early in May please note that the second annual dinner of the Cocoa Association of London, Ltd., is to be held on Wednesday, May 4, at The Grosvenor, in Park Lane, W.1, at 7 for 7.30 p.m. sharp. Successful as last year's function undoubtedly was, this year's dinner seems likely to build up "some" on the foundations of its predecessor. The Secretary of State for the Dominions hopes to be present, and this year it will be Mr. J. H. Thomas, whilst an equally helpful M.P. and ex-Minister in the person of Mr. Amery has also promised to be there, as well as Mr. Paul Cadbury and Sir Edward Davson who were not with us last year. Otherwise one hopes to see all those who sat at the long table last year again present, and perhaps a few more equally prominent and useful men in connection with the production,



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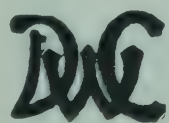
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When getting into touch with
Advertisers always mention "Tropical Life."

manufacture, and marketing of cocoa and sugar. Talking of marketing, there is one more thing we would like to say:—

International Propaganda.

The *Confectionery Journal* of March 24 included fairly full details of the proposal to organise propaganda on an international scale to push the sale, i.e., the consumption of cocoa products. To arrange such a scheme and put it on a practical basis an international conference is being convened by the Belgian Government, who propose to hold the Conference in Brussels on September 12-14. The manufacturers will of course be fully represented, but so, apparently, will the producing centres if they can see their way to accept the invitations to attend, as every centre seems likely to receive an invitation through the mother country. Full particulars it is to be imagined, can be obtained from the Secretary of the International Office of Cocoa and Chocolate Manufacturers, at 19, Rue des Chartreux, Brussels.

Prices and Quotations.

And now we must stop. Fortunately we can do so with good news, which will be all the better if we can repeat it next month and the month after. Grenada cocoa has moved up to 40s. and other growths are now valued up to that price, whether they have already realized so satisfactory

a figure or not. May they do so and then continue to improve, including Trinidads. These not only have not advanced but are not doing so well, if reports speak true, for 53s. is their top price for spot parcels to-day when it should be 55s., and the tale is told, and claimed to be true, that a parcel sold a little time back at 58s. spot. Be this as it may, current spot values include good Accras up to 32s. 6d., fair to 31s.; Trinidads 50s. to 55s.; Grenadas, good fair to fine, 37s. to 40s.; Costa Rica 35s. to 40s.; Bahias 36s. 6d., and Jamaicas 34s. to 40s. One report says up to 45s. for Jamaicas, but surely that is wrong, although there is one estate whose crop is easily worth 5s. more than the best Grenadas.

Looking round, one has to remember that from April 1 to October 1 the new law will be in force in America by which all cocoa considered to have more than 5% (instead of 10%) undesirable beans can be and will be rejected. Probably the thought of this was why Uncle Sam has been importing Accra kinds so freely. The figures for January and February have been given, those for March can still be on the same liberal scale, but after that what will happen, who will be ready to buy Accras on such a scale? Furthermore, of the 385,843 bags from the Gold Coast during the two months, or say, 500,000 for January-March, what quantity will be rejected, and how long will Uncle Sam need to absorb that which passes the censor? Meanwhile, suitable climatic conditions in Bahia promise to give that centre an output for May-April of 1,350,000 bags, more or less.

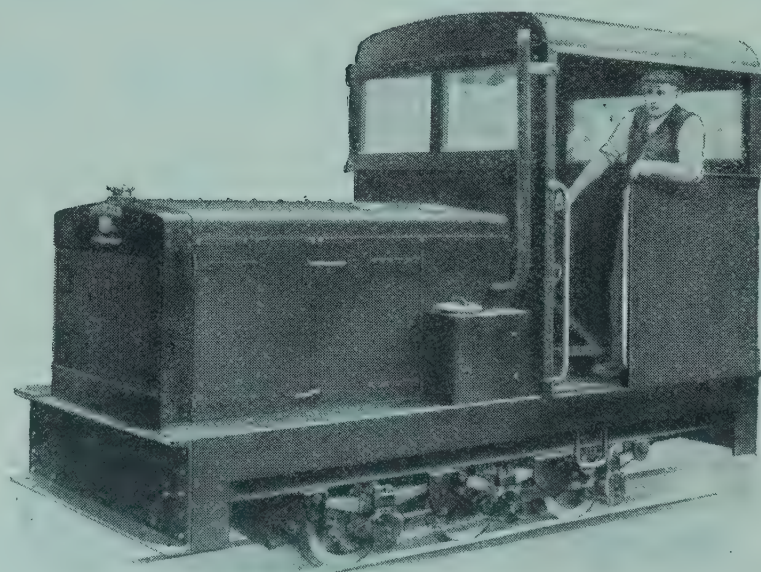
PETROL LOCOMOTIVES

SIMPLEX

DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ "
20	2½ "
20	4 "
27	5 "
50/70	10 "

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28th YEAR. No. 323.

MAY, 1932.

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IN TOUCH WITH EVENTS

"I am glad to see 'Tropical Life' still vigorous, a doughty champion always of tropical interests—well informed and good reading."—
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* * *

One must note with interest that Major-General Sir Leonard Rogers, Hon. Medical Adviser to the British Leprosy Relief Association, of which the Prince of Wales is the Patron, and our great authority on Leprosy and its treatment pointed out recently that experience has shown compulsory segregation to be of little use, whilst with the more humane methods made use of in Norway, the number of lepers in one area has been reduced from 2,858 to 67 only since 1856. On p. 86 we call attention to the work of the Association, and hope our readers will help to finance their efforts.

* * *

The year 1932, *The Farmers' Almanac* of the Armours' Company, Fertilizer Section, tells us, comprises the latter part of the 156th and the beginning of the 157th year of American Independence and corresponds to the year 6645 of the Julian Period; the year 5693 of the Jewish era begins at sunset on September 30; the year 2685 since the foundation of Rome, according to Varro; the year 2592 of the Japanese era; the year 1351 of the Mohammedan era, or the era of the Hegira, begins at sunset on May 6, 1932.

The first day of January, 1932, is the 2,426,708th day (giving about 365 days to a year) since the commencement of the Julian Period.

* * *

"Looking back, what a wonderful set of men have we (of the Royal Colonial Institute, now the Royal Empire Society) had on our Council. Ex-Governors, Administrators, Peers of the Realm, M.P.'s and so on. Sir Frederick Young, General Sir Bevan Edwards, Sir George Parkin, Earl Grey, Sir Charles Lucas, Sir Godfrey Lagden. Our Society has already passed its jubilee and its diamond jubilee; it is now on the way to its centenary, but it has already acquired a permanence which should last from generation to generation for centuries to come." Mr. Ralph Bond, C.B.E., in *United Empire* for April,

which reproduces photographs of the former members of Council named.

In the same contemporary Dr. Herbert Basedow, the Australian explorer, tells how in the regions west of Lake Amadeus towards the north of Australia, where the rain often falls to a useful extent only once in every eight or nine years, the indigenous natives, by instinct, obtain small supplies of water, enough to keep a wandering tribe supplied with the precious fluid while on a march in a truly wonderful way. Several natives scout a parched clay-pan and at certain carefully selected spots, dig diligently into the caked ground with their bladed sticks. The objects of their search were globular bodies, now held in their hands, about the size of an orange, containing water. On closer examination, these bodies proved to be frogs, which had surrounded themselves with a membrane, like a ball, under which the water was stored. The natives, in order to obtain a drink simply perforated the membrane surrounding a frog and drank the water.

* * *

The more one wanders round London, to say nothing of the rest of England and the Empire, the more amazed you become at the huge buildings being erected, truly like young mountains, often with flat tops of uneven heights, and you wonder what each one costs and where the money comes from to pay for them. The palace of Imperial Chemical Industries, we were assured at the time, cost £1,000,000, and so you wander round the hub of the Empire and estimate how many more scores of millions have to be added to that one in these days when only banks and insurance companies are supposed to have any money worth troubling about. Throwing away some papers, however, we came across a paragraph in one of them from which we learn that the latest returns show us to possess 540 millionaires, being an increase of twenty-one. This, one takes it, does not include such bodies as the Co-operators and the Salvation Army, with their many millions. Apart from such bodies, as well as the banks, insurance companies and other wise accumulators of wealth wasted by others, it is pleasant to think that both in real estate and in money or its equivalent there is still quite a useful amount in "the old country."

Whilst verbal reports speak of the increased imports of piece cotton goods from Japan into Kenya as having reached a very high figure lately, the following official returns are worth noting.

The competition between Japanese and British cotton cloth in foreign markets is growing keener. The results so far this year have favoured Japanese products, especially in China, British India and the Near East Market. Japanese products, including grey, bleached and finished goods exported last year amounted to 1,413,000 yards, showing a drop of about 10 per cent. compared with 1930, while British exports totalled 1,716,000.000 yards, indicating a sharp decline of 28 per cent. from the preceding year.

* * *

At a meeting of the Uganda Planters' Association, at Kampala, early in March, estimates were mentioned showing that even with the drastic shooting that the game rangers have to undertake at times, elephants are increasing at the rate of 1,000 a year. To let a crowd of Africans loose with rifles among them is, of course, extremely dangerous, and we cannot imagine that this will take the place of retrenched white game rangers. If some sort of scheme is devised whereby established planters are to be given favourable terms on which to shoot elephant, then perhaps the menace may be kept down for a little at any rate. But the terms must be at least "favourable"—perhaps "generous"—would be a better term. Shooting elephants is a little more dangerous than playing golf and should be rewarded accordingly.

* * *

Detective Edward Bird, of the City of London Police, was deservedly praised by Alderman Sir William Coxen, the magistrate at the Guildhall, for his kindness to a lad of 18, charged with stealing a wireless set belonging to his employers. The detective spoke up for the boy, saying he had neither parent to form a home for him and his rent left him but a few shillings a week for food, &c. He was obviously famished, so before charging him the detective provided him with a substantial meal and then kept him over the week-end at his own expense. The boy was discharged and handed over to the probation officer, the magistrate adding that the conduct of the detective should be reported to the Commissioner.

* * *

Who should know more about the extraction and preparation of gutta-percha for market than the Dutch, yet from a firm with many branches throughout the East comes the query, how to extract gutta from the leaves of the plant and who makes the extracting machinery needed? We have Government lands with gutta in Malaya and our experts there are well trained in obtaining the gum, but no one who remembers Dr. Tromp

de Haas, the Director of the Dutch Gutta-Percha estates in Java when here at the Exhibition and Conference of 1911 will doubt that Java still holds an important position when it comes to discussing the best and most up-to-date methods for extracting gutta from the leaves.

* * *

Of recent years the floodlights of science have illuminated the dark places in photography and dispelled for ever the need to grope in the dark. Processes previously obscure and complicated have become as clear as daylight, and even the gloomy depths of the darkroom have been illuminated so that development can be carried out in a comfortable light.

The problem which confronts the photographic artist when making an exposure is to reproduce in the negative by varying densities, the different lights and shades of the subject. It is not sufficient to impress the outline of the subject on the emulsion, but every degree of light and shade should be reproduced in full.

How this can be done to perfection is proved by attractive snapshots of St. Paul's Cathedral, when illuminated by searchlights which give sharp contrasts of light and shadow broken by a most attractive tint of shade. The street scene in Ajaccio (Corsica) offers the same effects, thanks, in this case, to the bright sunlight, and it is the same with "A Street in Malta," "paved" with shallow steps from one end to the other. Yet the shadow at the edge of each step is reproduced to a nicety. Write Messrs. Burroughs Wellcome and Co., G.P.O. Box No. 213A, London, for their pamphlet on the matter and see if our claims are not correct.

* * *

Major C. D. V. Georgi, the acting agricultural chemist attached to the Agricultural Department of the Straits Settlement and the F.M.S., and others are responsible for a report on the production of "Hydnocarpus Oils in Malaya" (Scientific Series No. 9). This matter has attracted much attention during recent years in connection with the treatment of leprosy. Summing up, we are told, that as a source of pure hydnocarpic acid, the oil from *H. Wightiana* seems to be preferable. Those interested in the matter should secure a copy of the report, which costs 50 cts. (Straits).

Major Georgi seems to claim that palm oil kernels, or their oil, from Malaya are slightly superior to West African as regards oil content, but that the testa or skin of the kernel is darker and that this dark colour of the oil can be correlated with the pressure at which the fruit is sterilised and the artificial drying employed. The colour can be improved if the fruit is sterilised at a low temperature; with their present system of treatment this is not always attainable or possible.

inferior localities. That does not mean that all the plants live so long but that it is an average of the life of the plantations taken as a whole.

Re page 30. *Raspador* is the man that puts the leaves on the conducting chain or bank. *Raspadora* is the machine. *Máquina raspadora* is equal to decorticating machine. A man named Solís invented the principle, as shown on page 31.

Re page 56. Hailstorms do damage sisal here. A friend of mine has been selling only spotted sisal for eight months on account of that, and there are many similar cases.

Re page 59. I do not think that *henequén* lives 100 years, I do not put the maximum age even at 50 and in usefulness more than 30 years. Some plants, especially in the inferior localities, remain alive after a plantation is abandoned many years, but in a kind of paralysis, the leaves become very short and the plants only yield three or four (leaves or cuttings?) in the year.

Re page 77. I do not know of a single sisal planted with dynamite or holes broken out with crossbars. Where there is absolutely no soil, tell that gentleman that we do not plant sisal. When men who do such work put plants in in that form and are not seen by the supervisors, then the suckers, instead of growing, become smaller and are of no use. Suckers do not appear here before three or four years.

Re page 89. The pole of a plant does not affect the suckers of same.

Re pages 89-90. Plants here, as a rule, never have more than 40 or 60 leaves. Anything over 30 is good.

Re page 92. Plants here yield from 15 leaves in the poorer region to 40 in the richer. An old uncle of mine always left two inches of the leaf in the plant, saying that too close cutting damaged the plant, and that if that very thick part went through the machine it caused more loss to the rest of the fibre in the leaf than could be obtained as a benefit from the part left uncut.

Re page 94. I would like to know where and when were obtained $1\frac{1}{2}$ tons of fibre from a two-year-old plantation.

Re page 102. In my father's estate we had three great fires which together consumed more than 3,000 acres, and practically all the sisal was lost.

Re page 123. My father planted *zapupe* with bad results.

Re page 130. *Henequén* has made many millionaires in Yucatán, but recent prices for *henequén* have also turned many millionaires into almost penniless people.

Re page 140. I have said already that poles here do not give so many bulbils nor affect the suckers.

Re page 147. Fresh waste or refuse injures other plants but not sisal.

Re page 187. The Yucateco is anyone born in Yucatán, not necessarily a Maya native. Lower

down you do not deal very fairly with the plantation owners. The Maya's idiosyncrasy, their laziness, their little ambition and their love of liberty in their work, as I have already said, are the real reasons for not having greater benefits from the sisal industry. I told you how I offered some sisal I had and was refused. All have a chance, and when there is one willing and capable he has the way open to get on. The haciendas were not made by rich people as a rule, although they are now in their hands. There are hundreds who own small plantations; all those who wanted to have them can secure one, nobody puts any difficulty in their way. In my small property I have eighteen men living there, one of them has nothing but the clothes he is wearing, and rather than clothes they can be called rags. Another younger one, with a larger family, has his own cart and mules for pulling it, horses and mares for other work, some head of cattle, goats, pigs, and hens. He lives in one of my houses, his animals graze on my lands, and when he does some work for me with his own appliances I pay him accordingly. He is not an exceptional workman. Between these two extremes are the rest. Nobody helped one or kept down the other, they developed according to their own merits. In the same manner the way has been open and will continue to be so for all those who deserve it.

Re page 192. I consider the *chucun-ci* as the best of the varieties of sisal.

Re page 194. Will you kindly explain to me how labour is handled in East Africa and Java. I think I have given many particulars about ourselves, so it may be that others will tell me of themselves.

I have spoken already about the life of sisal here. It is not due to the pole being cut because the pole here as well as elsewhere, is the end of the plant. Here where the plants grow quickly they end soon, and in regions where it takes longer to grow they live longer. If you have places where it grows sooner than in our best regions I do not see why it should not pole sooner.

Re page 195. I know many sisal plantations that were kept clean and the leaves cut when 28 years old. Of course they only had at that time 50 or 60 per cent. of the original plants. Mr. Garcia, owner of "Siho," sold to Mr. Arrigunaga some plantations well over 20 (I believe about 25) years old because he had too much and could not work them. I suppose Mr. Arrigunaga bought the right to harvest the leaves because he was going to profit by so doing.

"*La Vencedora*" is the largest type of machine invented by Mr. Prieto. I believe that it is the one most used and it is generally considered as the best, although Mr. Torroella has "*La Cíclon*" that does equally good work, and there are others also besides these two. That all are used is not strange because they all work

under the same principle and differ only in details.

Re page 214. I read that water is scarce in the sisal haciendas. It is true that we have no rivers, but nevertheless there is plenty of water underground and you can open a well in any place you like and be sure to get water at the regular depth (8 to 24 feet) in sufficient quantities. Here in Merida and in all the other towns and villages of Yucatán, each house has a well, called *pozo*. It is said in some geographies that there are subterranean rivers and that the *cenotes* are openings of those rivers. The water is taken out by windmills and pumps.

Re page 238. It was the Lic. (lawyer) Olegario Molina who commissioned Mr. d'Herelle, a French chemist, to get alcohol from sisal refuse. After some experiments all the necessary machinery was installed at considerable expense; I believe it cost over £30,000. They obtained alcohol, but not in commercial quantities. Later disturbances were the cause of the work being abandoned, otherwise we would perhaps have had that problem solved by now. I do not know if it ever struck anyone here to transfer our distillery elsewhere.

P.S. BY THE EDITOR.—I am sure that every sisal grower will be interested in these notes and criticisms and want us to thank Señor Peón first, for having made so close a study of our book and, that done, for taking the further trouble of jotting down his views as he did. We have written to thank our correspondent for the interest he has shown. Any of our readers in Java, East Africa or elsewhere who wishes to write to Señor Peón direct should note that his address is Rafael M. Peón, Apart.: 219, Merida, Yucatán, Mexico. If, however, they prefer to correspond with him through TROPICAL LIFE, we shall be only too pleased to forward the correspondence to Merida in the first place and then the reply to our readers as and when received.

Stocks of sisal in Yucatan in the middle of February, according to Messrs. H. W. Peabody & Co. of Boston, stood at only 106,000 bales (Progreso 88,000, Merida generally 18,000), against 292,000 bales (Progreso 142,500, Merida 149,500) in 1931, and 299,500 bales (Progreso 129,500, Merida 170,000) in 1930. Exports of sisal from Yucatan during February totalled 50,696 bales, representing the largest shipments in any month since September, 1930, with the exception of last December when 58,000 bales were exported. This left a stock on March 1 of 138,619 bales, as compared with 135,344 bales on February 1. In 1930 Kenya exported 15,947 tons of sisal and tow, practically the same as last year with 15,994 tons. From Tanganyika, 55,939 tons were exported last year, against 49,962 tons in 1930.

The Cord Age of New York claims that, during the eleven months, January-November, 1931, the east coast of Sumatra exported 43,303½ tons (1,000 kos.) of hard fibres, against 37,557 tons during the same period in 1930. Yet the value of last year's fibre is put at \$3,106,275 only, against \$5,297,178 in 1930. One wonders how the weight and value of the Sumatra exports during those eleven months this year will compare with the above.

Seven sisal estates are spoken of as existing in Haiti, of which, however, only one is said to have been in operation during the last half of 1931. This estate is returned as covering 10,000 acres of bearing sisal and being larger than the other six put together. At present values the lesser six seem to have stopped production. Here again, whilst the weight of exports increased, values in proportion dropped badly, the figures for their crop year showing that in 1930-31, 974 tons (1,000 kos.) were shipped valued at \$92,180 against 364 tons in 1929-30 valued at \$45,000. One wonders whether even the one big estate will survive this year's rates.

Talking of Sumatra is a reminder that the Department of Overseas Trade has issued, as Report 501, details of the "Economic Conditions in the Netherlands East Indies," by Mr. H. A. N. Bluett, our Commercial Agent at Batavia, 135 pp., price 3s. 6d., or 3s. 9d. post free, from Adastral House, Kingsway, London, W.C.2, and the usual Government offices elsewhere.

On p. 105 we are told, "It should be noted that a steady annual increase in the output of oil-palm and fibre products in Sumatra is to be expected owing to the steady annual increase in the cultivation. The advantages that Sumatra offers to planters, particularly for tea, oil-palm, and sisal cultivation, are still attracting attention, though capital for new estates is likely to be withheld until economic conditions improve. During January-June, 1931, 41,760 metric tons of fibres were exported from all N.E.I. sources, against 33,485 tons during the same half-year in 1930.

L'Azione Coloniale of Rome (Via XXIV Maggio, No. 46) in its issue of March 20 devoted two columns to Kenya, and its crops, based on the visit that Sir Daniel Hall paid there a year or two back, heading the double column with the reproduction of a photograph showing sisal being decorticated at the Italian colony of Eritrea in North Africa, near to Kenya, but far enough off to make one wonder how sisal is doing up there. The reproduction is too blurred to say whose machine is being used, but it looks a fairly large one.

WHERE THE BLACK MAN RULES.

Liberia and the League of Nations.

SOME time back we called attention to an atrocious case of the flogging of three blacks by other blacks in authority over them; now we read that nothing has been done in Liberia to improve the lot of the unfortunate under-dogs there, especially those up country. In our issue for February, 1931, we called attention to the report drawn up following the investigations, when statements were made that called for instant redress, but so far nothing has been done, we are told. As neither progress nor its opposite stands still, one feels, therefore, that here is another example of the black race being unfitted to have charge of a community. The sooner the fanatics over here who are so keen to put the blacks on an equality with the whites—to say nothing of their paramountcy—are made to realize that the negro race can never shine as rulers, the better both for the blacks and the world at large.

A recent review of Joice Cary's book, "Aissa Saved" (Ernest Benn, 7s. 6d.), again shows the terrible risk of attempting to impose a thin veneer of civilization and of setting up some natives over others, in this case in Nigeria. The review goes on to say:—

"There is nothing in this story which is inherently impossible for it to have happened in Nigeria, the land of ju ju and witchcraft. It is not so many years ago that the Nembes descended on the old Niger Company's station of Akassa, took all the native inhabitants prisoners and ate them while a missionary had to look on. It is only two years ago that mobs of naked armed women overran several trading townships in Southern Nigeria and had to be dispersed by troops. It is only the other day that a missionary, who jokingly asked a small boy when he had tasted human flesh last, had to be got out of the country hurriedly."

Those who are so keen to over-educate the African natives will be wise to remember these episodes and many more like them, as for instance the swelled-head trouble reported from Tanganyika, where the "educated" native considers railway engine driving and such work as beneath his dignity.

Discussing the case of Liberia in the House of Lords (on March 16) Lord Buxton, most tolerant of men, with rather too much of a leaning towards the native, paid tribute to Dr. Cuthbert Christy (an old "Friend" of *TROPICAL LIFE*) and his colleagues who formed the Commission appointed to visit Liberia and inquire into the allegations made with regard to slavery and forced labour and praised the great industry and courage they showed throughout the time they were there.

They found that, while in principle all labour was free and, when employed, justly paid, in practice the labour employed on public works were "forced" to go, and it is not surprising that there were no willing workers since those who went were neither paid nor fed and had to work frequently under conditions involving systematic intimidation and ill-treatment on the part of the Government officials. Another example of how the Black Man rules.

"Not only so," Lord Buxton went on to say, "but to a large extent such forced labour was diverted to private purposes and privately-owned plantations and used for the personal gain of Government officials and others. Among the Government officials and others they mentioned the President and Vice-President, members of the Government, members of the Senate, and Government and other officials. It appears that extortionate fines were imposed without any judicial authority, largely for the benefit of officials or members of the Government. Those are the conclusions to which Dr. Christy's Commission came. It has been known, I think certainly to our Government and to others, for some time past, that deplorable conditions did exist in Liberia, but I do not think anyone appreciated or realized the full extent of what was going on in regard to slavery and forced labour and those orders to which I have referred."

"We have heard," Lord Lugard said, when carrying on the debate, "a good deal of late about the maintenance of the prestige of the League of Nations in connection with events in the Far East. Surely there can be nothing more damaging to its prestige than the failure to take effective action in a matter in which it has become so deeply involved. Liberia has broken the Covenant, broken the treaties to which she is a party regarding slavery and forced labour, and the witnesses before the League's own Commission are being persecuted, two million Natives have been reduced to a state of misery by a handful of foreign Negroes, and a slur is cast on the progressive elements of the African race by their deeds. Liberia claims the privileges of a member of the League of Nations and it would seem that in order to maintain the so-called independence of a small foreign oligarchy it is necessary to obtain their consent before such measures as the League may consider necessary can be put into force. Is membership of the League of Nations to afford protection for gross misrule?"

"The persecuted people" added Lord Lugard "are industrious, and the population is believed to be denser than in most other parts of Africa." "There appears to have been a recrudescence

of the campaign of cruelty and oppression by the Americo-Liberian governing class," Viscount Snowden said in his turn, "and it appears to have been directed against the aboriginal natives and most particularly against a tribe called the Kru. This tendency had already been noted and commented upon by the experts who went to Monrovia. From these reports there was ground for believing that the campaign was in retaliation for the complaints by the Kru people to this International Commission. Information reached His Majesty's Government that a detachment from the Liberian Frontier Force had been sent into the Kru country, ostensibly to collect taxes and enforce the surrender of arms, but this force, it is reported, acted in a most tyrannical, cruel and high-handed manner, and the loyal Chiefs complained that the Government forces were burning and pillaging and that hundreds of natives had been killed."

But Viscount Cecil of Chelwood perhaps hit the hardest when he rapped out such points as these, "the total incompetence of all departments of the Government." Who, one wonders, expected anything else. "What they (the Americo-Liberians) have done—and a scandalous and terrible state of things was referred to by Lord Buxton—is this: they have engaged in slave trading, or something indistinguishable from slave trading, by which a considerable number of the natives were shipped over to Fernando Po and other places. But the real trouble of Liberia is the incompetence of the Government, and corruption—but the incompetence even more than corruption. . . . There should be one supreme WHITE official to whom

all the others should be responsible." In plain English the ruler should not be a black or Americo-Liberian but a white man, and so everyone must say who knows the black and coloured races and how they have ruled each other.

"Of course," pointed out Lord Astor, "there is the difficulty of the League of Nations as Liberia is a member. . . . In the Christy Report I noticed that the Commission finds that a large proportion of the direct labourers shipped at Fernando Po have been recruited under conditions of criminal compulsion scarcely distinguishable from slave raiding and slave trading. Now I am certain that it is for the interest of Spain to rectify matters and, similarly, I feel that it is to the interest of Portugal, which is also mentioned as one of the countries to which these unfortunate Liberians are sent, to end this scandal." And so, many of us will learn for the first time of another source of labour gangs for San Thomé and Principe. In spite of this, one has to own their cacao-producing industry fails to prosper.

We could say much more, but will not. Surely enough has been said to prove that if the World, the black and native races in particular, are ever to prosper and be happy, it can only be under the supervision of white officials. The pure blacks cannot pretend to compete with the white, whilst as to half and halves, remember the warning of Olive Schreiner, kindest of women, when she urges the need of realizing that if there is trouble between blacks and white, it is the half blacks generally that cause it. They seek to despise the all-black, and are jealous, at times to absolute hatred of the all-whites.



THE BRITISH LEPROSY RELIEF ASSOCIATION.

Those who take a sentimental as well as a practical interest in their fellow man and, indirectly, through him, in their own well-being, should send a shilling or its equivalent to the Secretary of the The British Leprosy Relief Association, 29, Dorset Square, N.W.1, London, and ask for an illustrated copy of the report on the work the Association is doing throughout the Empire, Colony by Colony, station by station. In the old days, when leprosy was worse than a nightmare to the leper himself, it was still considered that there must be at least 2,000,000 lepers in the world. To-day, when the lepers, like the poor of Paris in Victor Hugo's "Notre Dame," pour out from the "Cour des Miracles" into the highways knowing—with the lepers—that help is around, the number of affected people is better known and considered to be three, four or even five times the original estimate; the British Empire itself contributing anything between 1,250,000 to 2,500,000 cases. Yet given the money to carry out the campaign to the death

of leprosy for all time, modern science to-day sees its way to rid the world of this pest in the course of two or three generations at the most, but the money must come first. Leprosy is said to be the "Cinderella" of tropical diseases. This may be true so far as treatment is concerned, but it is a "Cinderella" that dates back almost to Mother Eve, and now we know that Science as this era's Prince Charming does exist, we beg those of our readers who scan these notes to send money, as much as they can, to provide Cinderella with her "outrig," i.e., perfect health and freedom from disease, which is all she needs to prove that she is as capable and comely as anyone else in the wide, wide world and to take her place anywhere as a world-worker among others. The Leprosy Relief Association, of course, publishes its quarterly publication, known as the "Leprosy Review," at the price of two shillings, probably post free. Send that amount to Dorset Square and ask for a copy; you will not regret doing so.

COCOLOGY.

Coconuts in Patna.

THE Puri Coconut Farm is situated on the sea beach at Puri at a distance of about two miles from the railway station and close to the casuarina reserve of the Forest Department. It was started in 1925 on an area of 42.30 acres acquired for the purpose, of which 18 acres were planted up with 1,126 coconut seedlings during the first three years, taking advantage of the Casuarina forest serving as a wind break, without which it is not possible to grow anything on the beach on account of the sand blown in by strong wind from the sea in the summer, covering the ground to a depth of several feet in the course of a season. The remaining fallow area—about 18 acres—is exposed to the sea and for planting it up in due course a wind break of Casuarina several lines deep was put up and gradually deepened by adding a few more lines from year to year.

The surface soil is nearly pure sand of a loose and coarse texture and is deficient in all the essential constituents. It contains 98 per cent. of matter insoluble in Hydrochloric acid and 0.01 per cent. of Nitrogen, 0.0115 of P_2O_5 and 0.20 of K_2O about one-tenth only of which is available.

Statements of the monthly abstract of rainfall during the year, at Puri town, the nearest recording station, show that, during the twelve months of 1929, the rainfall amounted to 50.49 inches, to which August contributed 11.43 inches and October 12.45 inches.

Out of 1,126 coconut plants in 56 ridges, 722 are four years old, 367 three years and 32 only two years old. The casualties during the year were practically nil, only one two-year-old plant having died and this was replaced by a fresh seedling from the nursery.

For the first half of the year the plants were manured with a mixture of 16 *maunds* of Fish Refuse and 100 lb. of Sulphate of Potash at the rate of 4, 8 and 12 chattaks per plant per month, according to their age. But towards the end of the year when the Fishermen's Stores at Balugaon could not supply any Fish Refuse it was replaced by oilcake, using 20 *maunds* of it in place of 16 *maunds* of Fish Refuse on account of its lower nitrogen content. As no watering was required from November to February, the application of manure was stopped during the period.

There was a bad attack by a leaf-eating insect (*Nephantis serinopa*) during the year, which fed on the mesophyll layers of the lower and older leaves, but it was completely checked by cutting off the affected leaves and burying them under sand. The cyclone in October affected the older trees to some extent by throwing them out of the plumb, but they were straightened promptly when the sand was still wet.

No fresh planting was made during the year as the Casuarina windbreak was not sufficiently

deep to stop sand blowing in into the fallow area. The plantation was completely freed from the Goat Creeper which has improved the condition of the young plants of which the roots were practically ramified by them. It is now, on the whole, in a fairly flourishing condition.

Coconut-Oil Machinery.

Is this why Orders are so Scarce?

Referring to the second review of the third edition of Professor Copeland's book on "The Coconut," Mr. Robert A. Smith, of Victoria Street, who has always paid close attention to the extraction of vegetable oils, writes saying:—"Re your review of Professor Copeland's book. I have not seen it myself, but judging from your remarks it does not reveal any marked advance in mechanical apparatus for drying copra or expressing the oil.

"With regard to the latter, the "expeller" probably gives the greatest through-put per hour in proportion to the capital outlay and working cost, therefore it is being used by producers whose quantities are sufficient to justify the initial expense (which is considerable). Oil will not express itself, therefore some sort of machinery is necessary, but drying is a different matter.

"Drying is a function of air-volume, temperature, and (last but not the least in importance), time. Given open air, sun temperature, and time, copra will dry naturally. The process can be hastened artificially, but owing to the nature of the material to be dried, the first two essentials above mentioned cannot be increased to such an extent as to render the third negligible; therefore, if you have to dry a large quantity of material per hour the size of the receptacle, or drying chamber, air heater and other apparatus, must be proportionate both to the quantity and to the time.

"Yet if you meet a copra Tuan Besar and he tells you he is languishing for a good drier, if you work out the size of the apparatus he needs and show him the price, he merely replies "Oh, my G—d!" and carries on with good old Sol or any Heath Robinson junk he may have knocked together.

"Whatever system or apparatus you may fancy for drying—and their name is legion—you have to deal with the following facts:—

(1) that nearly half the weight of your in-put is water which must be absorbed by air.

(2) Air will absorb just so much cubic ft. depending on its temperature.

(3) The maximum temperature of air in contact with copra is limited to a certain figure for specific reasons.

(4) The volume of air which can be brought in contact with the copra efficiently is also more or less limited by other considerations, and:

(5) You cannot get a quart into a pint pot.

"There are plenty of engineers in this country who can design perfectly satisfactory apparatus suited to the material to be dried and, if required, can make it automatic and, as nearly as possible, foolproof in action. I am one who has done it, but, the plant cannot be produced for the equivalent of nothing and that is all the would-be buyer wants to pay. You may take it that the real problem we engineers have to solve is not how to dry 'en gros' but how to find a market, i.e., how to find adequate remuneration for the product of our brains and knowledge."

An Englishman in Mexico wants news of the raw material of chewing-gum to compete against chicle. We have satisfied his preliminary needs. A subscriber in Monrovia (West Africa) asks for books on coffee curing; and on tropical estate management generally. He also wants details of the Chula dryer and wants to get into touch with suppliers of drying houses. Last but not least, he wants the name of a maker of an inexpensive palm-nut cracking machine. Full information supplied.

"Is sisal suitable for making deep-sea fishing nets?" asks a London firm, who we referred to General Sir William Furze, Director of the Imperial Institute, for reply, knowing the interest Sir William takes in the matter.

From Brisbane comes an inquiry re a degreasing and de-oiling plant, whilst speaking highly of the chances of Tung (or Chinese wood) oil doing well within the Empire if cultivated and prepared along the right lines.

This is a reminder that, at the March meeting of the Executive Council of the Joint East African Board the Chairman (Sir John Sandeman Allen, M.P.) asked for views of members in connection with the third annual report of the *East African Agricultural Research Station, Amani*, for the year ended March 31, 1931, and Mr. Wigglesworth stated that considerable progress seemed to have been made during the year. The work on sisal was of particular interest to Tanganyika, and if the research at Amani resulted in a plant with a larger percentage of fibre in the leaf and a longer life being evolved, East Africa would be placed in a supreme position in regard to the sisal industry. He stated that there had been some delay in acquiring land for a Low Level Station, and agreed with Major Walsh that the Tanganyika Government should be urged to make the position clear and to co-operate with Amani by granting a suitable site for this purpose.

Mr. Wigglesworth then referred to the Director's statement that the results of experiments with tung oil (a high priced product grown almost exclusively in China) continued to be disappointing throughout a wide range of trials at different altitudes. Major Dale stated that certain experiments in Kenya with tung oil were so far successful, and the Amani Report also mentioned that plants sent to Kenya were progressing.

It was resolved to write to the Colonial Office expressing appreciation of the progress which had been made at Amani, but pointing out the need for acquiring a Low Level Station as a sisal experiment station at the earliest possible moment, since references throughout the Report show that the officers of Amani consider that the best results can only be obtained from an experiment station under their direct control.



COTTON GROWING NEAR LAKE NYASA.—PART I.

By SUSETTE CRAMER.

EAST Africa, as most people are aware, is given up to a great extent throughout the more civilised part, where white men have settled for twenty years or more, to tobacco planting, for of course in such a vast territory the greater portion is still unexplored. Besides tobacco other crops are grown, for instance in the hottest regions, generally near the great Zambesi river, we have sisal grown and it does well, but where it is not quite so hot cotton is much cultivated, with large plantations near Lake Nyasa.

Perhaps a few words on how the Lake is reached would be interesting. Beira (Portuguese) is one of the ports for East Africa, and before the war small steamers left there for Chinde, one of the mouths of the Zambesi, after which a little river

boat went up to Port Herald where the railway was reached. Now, however, the railway goes right from Beira to Muraco on the Zambesi, where a small steamer is waiting to take the passengers to the other side (spending the night on board); Chindio is reached next morning and here the train is waiting, which that evening arrives at Blantyre, the commercial capital of Nyasaland and the present terminus of the Cape to Cairo railway.

In the old days—though not so long ago—the journey was then continued by *machilla*, a covered hammock carried on native shoulders. Now, however, everyone proceeds by motors, taking about eight or ten hours (instead of three to four days) to reach Fort Johnston, unless of course the rains are

"on" and the roads and bridges have been washed away in places.

Fort Johnston (named after Sir Harry Johnston, first Commissioner of Nyasaland) is six miles from the Lake and the Shiré river, a branch of the Zambesi, passes the town but is very little used as the river is in parts quite choked with reeds and water plants, so we cross by the ferry, which carries the motor too, and a good road leads to the Lake where there is a steamer the "Queen Victoria" (Capt. Ross) for the voyage up the Lake.

Lake Nyasa is large, though not the largest of the lakes; it is three hundred and sixty miles long, but is narrow, not more than about forty miles at its widest part; it is subject to very severe storms, which rise very suddenly when navigation becomes both difficult and dangerous, but on this my first journey it was calm and peaceful. The "Queen" stopped at Monkey Bay and Fort Manning, and then arrived at Mtengula on the Portuguese side where I was bound for, a small "Boma" where a magistrate lives whose chief duty is to collect the yearly tax from the natives.

Mtengula is just a few houses built on a small piece of land that stretches out into the Lake. Cotton is not grown right on the banks which are high and irregular, but about eight miles away at a place called "Usa" where the soil is very suitable for its cultivation. The ground is prepared for sowing the seed by October ("Spring" in East Africa), by two or three hundred natives, including many women with young babies on their backs, who have hoed the soils, beaten all the clods, and are now only waiting for the first rains. These natives are under a "Capatao" or Head boy, one generally with some education (from one of the Missions), for he has charge of paying all wages, and is also responsible for the crop; he is therefore of some considerable importance, and rules the other natives rigidly, though kindly enough for the East African native is not as a rule cruel to those of his own tribe.

Work on a cotton plantation begins early, before sunrise, when the first faint rose colour preceding the dawn begins to creep over the eastern sky. The natives of the many huts adjoining the plantation are roused by the loud harsh sound of the "Lipenga," a piece of iron hanging from a branch of tree and beaten strongly with a stick. There is no delay. All men, women, and children, come pouring out of the huts, there is no need to stay to dress, they have slept in their costume, a few yards of native cloth; no bed to make, if they are luxurious they sleep on mats, but their slumbers are generally taken in the kindly breast of Mother Earth; no waiting for breakfast, they have eaten to repletion the night before, and will not have a meal again until the late afternoon; there is however a large jar by the door filled with cooked *chimanga* (maize) and, as each one goes out, he or she grabs a handful of this, stuffs it into his or her mouth, and is at once ready for work.

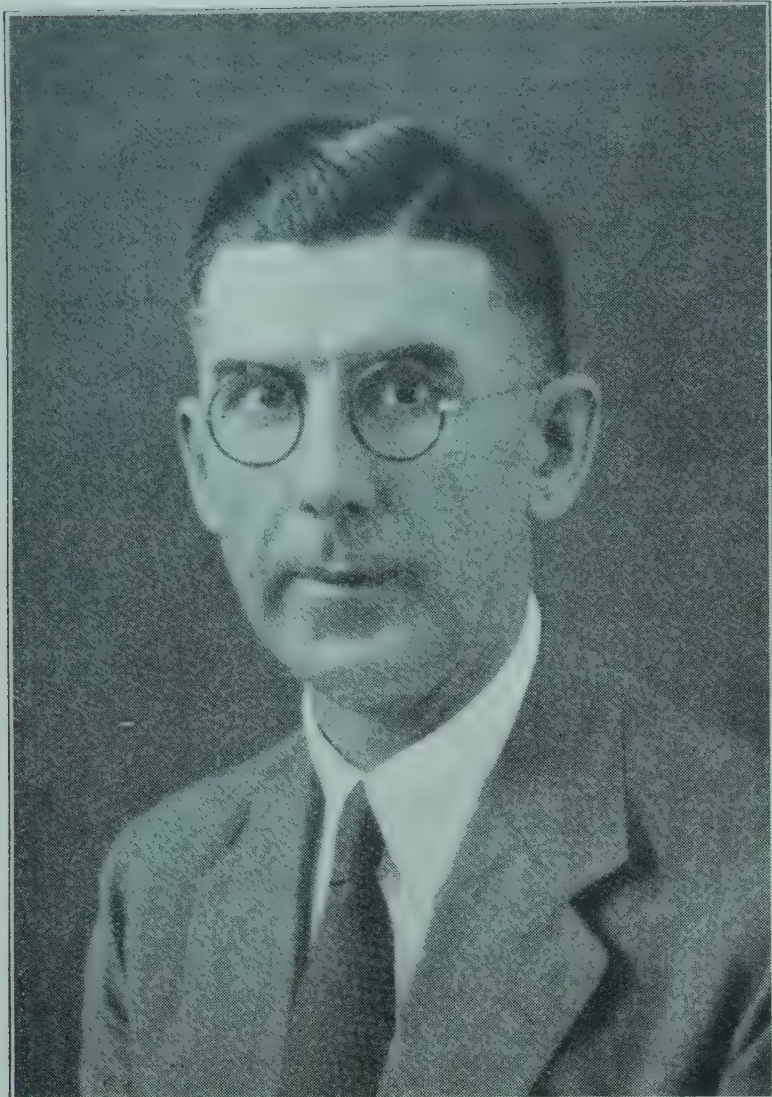
The *Capatao* is there waiting to give orders, which he does with energetic shouting and loud-voiced commands; everyone however is very cheerful and happy for the East African native generally makes work into play, shouts and sings and enjoys himself with all his friends, and as there are so many of them working together, it is impossible to be lonely or dull.

(Continued from p. 90).

decision of the local Government to do as we urged and place contracts for the year 1932 on the spot instead of through the Crown Agents. . . . This surely is a wise policy when we consider the grave risk the local Government has been taking of being saddled with dead stocks due to importing direct."

With regard to cacao and other products, in his summing up of 1931 as a planting and trade year, those present were reminded that their cacao industry goes back to the 16th century and that reports speak of the Gold Coast output as having reached its peak. "The only increases of importance," the speaker added, "would probably be in Nigeria and the French Ivory Coast." By now we know from the report drawn up by Mr. Schwarz that the French appear anxious only to supply their own needs and then stop. This object has practically been achieved, and as to Nigeria, well, our honest opinion is that Nigeria may reach 100,000 tons when the Gold Coast reaches 300,000 tons, and that won't be . . . in our time from all accounts. With Trinidad it seems that there are some 17,000 producers of cacao, 15,000 of which "handle" 50 acres and under. There are, it is reckoned, 210,000 acres actually under cacao in the island. This area at the old time (1883, when the writer first came to London) reckoning of two bags each $1\frac{1}{2}$ cwt. to the acre, should give 420,000 bags, whereas the returns are about 20 per cent. or 25 per cent. below that in spite of individual claims of a bag or more per 100 trees. Tobago has established co-operative fermentaries which are proving a marked success for the small proprietors, and Mr. Forbes expressed the hope that similar advantages should be "strewn about" Trinidad. The Cocoa Planters' Association have handled about 685,000 bags of cocoa since June, 1915, say, 278,500 during 1916-1923, and 406,500 bags from 1923-1931. This gives an average annual trade of about 42,648 bags. They started with 18,267 bags in 1915-16, and passed 68,000 bags for 1930-31.

This island, the same as the Gold Coast, is "hanking" after a lime, grapefruit and other citrus fruit industry. This being so, would it not be wise for both centres to compare notes from time to time, and even, when the start is made and success arrives, to work together with regard to the marketing of the crops?



[By courtesy of the W.I.C. Circular.]

"Tropical Life" Friend.

No. 323.

MR. JAMES FORBES.

*Manager of the Cacao Planters' Association in
Trinidad, B.W.I.*

FIRST of all we are not pleased with the photograph from which the above picture was reproduced, but it was the only one we could obtain on the spur of the moment, and if it had not been for the help of Mr. G. P. Osmond and the kindness of Sir Algernon Aspinall, of the West India Committee, the following remarks, like the body of Charles I, would have been without a head, and that would, of course, have spoiled everything. The pose chosen indicates the alert keenness of "Our Friend" with his eyes looking across to the sanctum of the Chancellor of the Exchequer to see if the coming Budget (now more or less ancient history) is inclined to show more willingness to be fair to the West Indies, especially Trinidad and the C.P.A. this year than it has done for some years past. How Mr. Forbes is looking to-day, when the worst and best are known of the Budget, we have yet to learn.

Strictly speaking, "Our Friend" is a perfect example of being a Trinity in Unity, the Unity

always having to do with cacao. The island papers have told us this mail, the *Trinidad Guardian* in particular, that Mr. Forbes is President of the Agricultural Society of Trinidad, also of their Chamber of Commerce as well as being Manager of the C.P.A. (Cacao Planters' Association). One feels therefore that the industries of the island—and these industries are many—are in good hands with a level-headed director and experienced colleagues, well-trained to do team work for everyone's benefit. It is such men as these whose will and wish to serve the Empire have always caused them to be the first to offer financial and other assistance on this side when such help is needed or times of stress prevail. Trinidad did so at and after the war, and in connection with the Cacao Congress and in other ways. It is a pity one cannot give all the facts, but this is impossible. We feel justified in saying, however, that at times British Guiana and the rest of the British West Indies might have backed Trinidad up to a greater extent than they seem to have done. Such support, of course, means sacrifices, but surely the ideals aimed at are worth such sacrifices as are necessary.

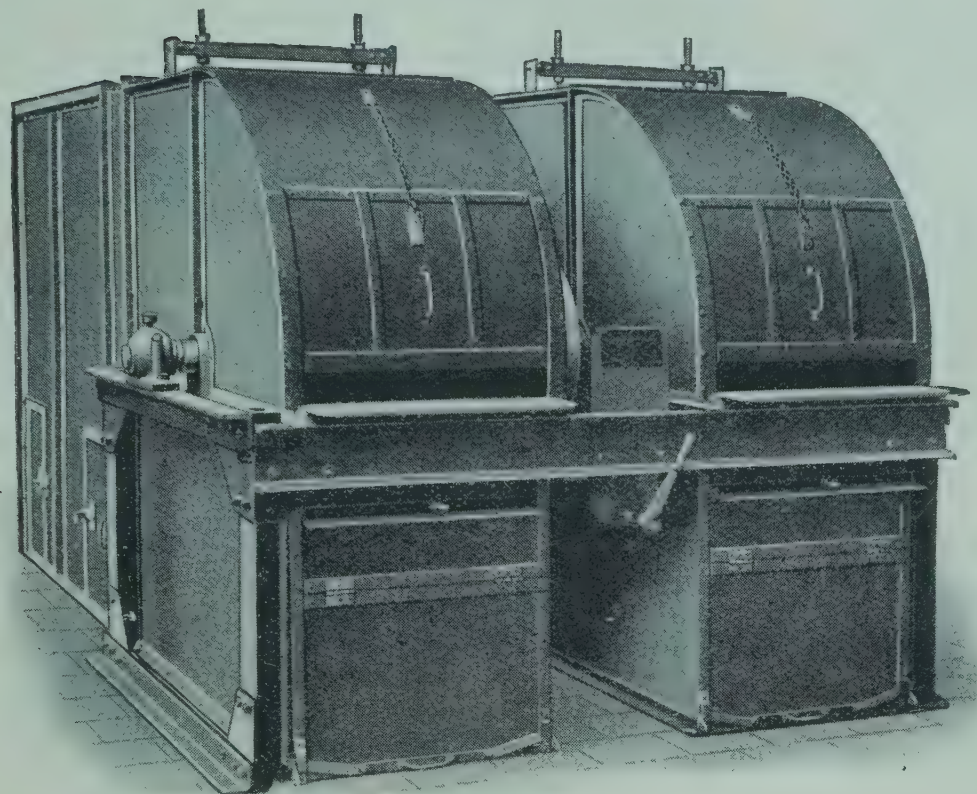
So far as we can remember, Mr. Forbes has been "fixed" in Trinidad since 1909. His youthful appearance, judging by the last time we met, causes one to look up the date, for you feel that at least it should be ten years later, but from all accounts the date given is the correct one. When we referred to the anxious and doubting look on "Our Friend's" face, we were thinking of the report of the 41st Annual General Meeting of the Trinidad Chamber of Commerce at which, according to the *Guardian*, members were awaiting news of the approaching Budget with bated breath—but with a spirit of optimism.

"Our Friend," as President, reviewed the agricultural and commercial pursuits and prospects of the island and pointed out most emphatically the opportunities which public opinion everywhere offered through the coming Budget to back up any practical proposals over here to pass proposals in favour of Empire goods in a way that will benefit the planters and give support to modern Chancellors of Exchequers. As important producers of cane sugar and oil, eagle eyes and ears were naturally on the *qui vive* when the mail left around the end of March for news that they received on April 20.

Discussing the situation after the luncheon in honour of the Chamber's birthday, Mr. Forbes said, "We have completed a period which will go down in history as the zero year of world commerce, yet despite our troubles the membership of this Chamber has been maintained, it even shows an increase—of one over the previous year." Coming to the benefits of having the Chamber, "Our Friend" told those present that "we welcome the ultimate

(Continued on p. 89).

THE NEW "BIJOLI" SISAL-BRUSHING MACHINE WITH DUST-COLLECTION CHAMBER

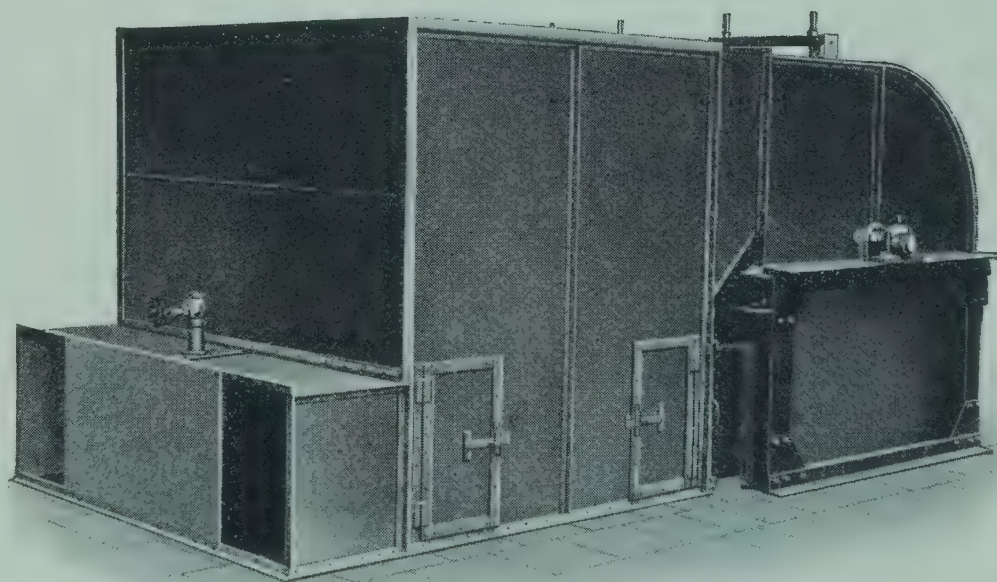


No. 124

Front view of
"Bijoli" Twin Hand-
Fed Brushing Machine
with dust collecting
chamber at the back.

No. 125

Side and back view of the "Bijoli" Sisal-Brushing machine showing large cleaning doors in dust collecting chamber and water regulating valve on spray box for precipitating the dust. There is a sump and drain underneath which cannot be seen in the picture.



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SUGAR NOTES.

It would be interesting to know the opinion of an authority like Mr. Wynne Sayer, of the Sugar Bureau at Pusa, India, on the present state of the sugar-producing world, especially as one keeps hearing how India is striving to put her own house in order with regard to sugar production on modern lines. Two years ago, i.e., in June, 1930, Mr. Sayer wrote us as follows:—

"I have always felt that in dealing with a commodity like sugar we are faced by a chain of facts which makes it very difficult to work on, or work out an exact profit and loss basis or even to guess at the lowest price possible. No one can guess how low Java can go in the price-cutting war.

"Cuba is so much in debt that the big business behind the sugar world cannot afford to let her fall. It is the old story of owing so much that your creditors must prop you up. All the European countries appear to be putting beet on the dole and I must admit that, in England, the beet subsidy really shows up as something which has helped agriculture, but it is difficult, in the maze of politics and (protection) policies to get down to actual facts. Meanwhile most of the customers are rapidly becoming producers, and that is what is tightening up the market.

"Here in India we are chasing our own tail. We have raised the duty again and now we are solemnly proposing to hold an inquiry to find out if the sugar industry needs protection, a Gilbertian situation worthy of a brighter setting. If we find it does not, shall we take off the duty? Who can say?

"As regards by-products, they will probably, as in the jam industry, really supply the profits, but not yet. We have still some way to go before we can all have surplus megasse."

Much has happened since June, 1930, enough to make such a letter doubly interesting.

Mentioning sugar production is a reminder that we wish to call attention to the Memorandum on Sugar drawn up by Dr. C. J. Robertson, of the International Institute of Agriculture at Rome, apparently for the use of the League of Nations, under the heading of "Geographical Trends in Sugar Production." If this was so, did not the treatise appear in their Publication, Economic and Financial Sections, II 20, p. 31, published at Geneva in 1929. This query is raised because the eleven-paged copy recently received is described as being reprinted from the *Geographical Review of America*, p. 120-130, vol. xxii, No. 1, January, 1932. Whatever the date, the contents call for attention as they raise the point whether, all things being equal, cane sugar will not eventually drive beet sugar, as an exporter, to the wall. This claim is excellently summed up in the concluding eight lines, the truth of which has never been more striking than to-day.

"Whilst the advantage mentioned may, with the continued assistance of tariffs and other measures of assistance, maintain the beet area, there are limits to the cost bearable by public funds and domestic consumers in the countries concerned in the attempt to neutralize geographical realities. The increase in the world-consumption of sugar in the future seems likely, then, to be met by the development of cane-sugar potentialities in the tropics and by increased unit yields rather than by extension of the cane area."

A very reasonable query has been raised in the March number (vol. xx, No. 10) of the *Philippine Agriculturist* by Mr. N. B. Mendiola, of the Department of Agronomy and a well-known writer on economic products in Manila and the islands around.

"Should new Sugar-cane Varieties be Patented?" he asks. To such a question we should certainly say Yes, why not? If weeks, months, years, even a life-time or two are taken up in working out a new type of engine or manufacturing machinery, and it is considered just, wise and quite natural for the perfected machine and, later on, the further improvements to be patented so that the resultant profits shall go to those who deserve them, surely the same rule must hold good for new breeds of sugar-cane, POJ 2878 and all the others. Market gardeners, fruit and vegetable breeders "hang on" to their new varieties and benefit thereby (whether by being patented or registered we are not sure), so should those individuals, experimental stations, colleges of agriculture, and so on be allowed to benefit by the monetary profit as well as by the honour pertaining to their inventions. "No geographical limit with sugar-cane should be set," it is urged, "any country should be allowed to grow a patented variety provided that country pays for the right to do so." The late Mr. Hinchley Hart, of Trinidad, urged the same things twenty years ago or more for new varieties of cacao, but such things have never been sought out and brought forward as have new sugar-cane varieties, and as they are likely to be as long as cane sugar is called for.

"We" (*The Australian Sugar Journal*) "showed in October that whereas the average price received for raw sugar in Australia over the past four years—that is, the price available for distribution between growers and millers—had been £21 14s. 11d., the price for the 1931 crop would probably not greatly exceed £17 10s., a drop of something like 20 per cent. in itself and involving a loss to the grower of about 8s. 6d. per ton of cane." What would our Cuban and other sugar-producing readers say if they could get even £7, much more £17 per ton for their sugars?

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Tropical Life.

MAY, 1932.

Is the League of Nations a "Costly Fiasco"?

By LESLIE R. ALDOUS (*League of Nations*).

WHEN a London journalist, enjoying such a high reputation as "A. A. B." of the *Evening Standard* has justly earned, voices a categorical opinion on a given subject, his facts and figures will almost certainly be taken for granted by the majority of his readers. On this authority, TROPICAL LIFE recently quoted,¹ and commented on, extracts from a vigorous attack by A. A. B. against the League of Nations. The article in question was topical. It appeared at a time when the League, in common with most national Governments, was facing tremendous difficulties. In these circumstances, criticism of Geneva was to be expected. But criticism, to be valuable, must be based on accurate knowledge. Those who were in a position to check A. A. B.'s data must have speedily realized that his jumble of half-truths, unassimilated statistical tables and glaring inaccuracies was far from furnishing a sound guide to the merits or demerits of the League of Nations.

Economy is essential, as well in international as in national expenditure. If we are paying £350,000 a year towards the League of Nations, we have a right to demand full value for money. In passing, let it be noted that that "£1,000 a day" represents the combined League subscriptions of Great Britain, Canada, Australia,² South Africa, New Zealand, India and the Irish Free State. At the Peace Conference, all the self-governing States in the Empire demanded the status of being Members of the League in their own right; hence they are assessed separately and have individual votes at Geneva. During the current year Great Britain will actually pay very little more than either France or Germany. Her bill of £182,000 challenges comparison with other items in the British budget—even such details as printing and stationery in the Admiralty cost considerably more. What our nation annually has to spend upon armaments would cover our contributions to the League for five or six centuries. The temporary wooden Waterloo Bridge cost £165,000. Al Capone, the American gangster, last year paid his personal bodyguard three times as much as Great Britain spent on

¹ See our issue of February, p. 34, and, may we add, whilst being only too pleased to publish this reply to what we then said, events during the last two months seem to us fully to confirm the opinions we expressed.—Ed. T.L.

² If we remember rightly, Australia's contribution is £40,000, and she too is asking why spend that amount merely to be told to weaken our Navy.—Ed. T.L.

the League. Up to date, the total sum which we have subscribed to Geneva is equivalent to the cost of about four hours' fighting during the Great War.

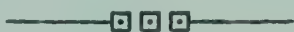
On the other hand, an annual expenditure representing considerably less than a penny per head of the population might still be dear unless justified by results. In this connection, it is frequently forgotten that one single activity of the League saved this country more than we have yet paid. When, in the early years after the War, Austria was on the verge of bankruptcy, chaos and probable revolution, British money was expended in a vain effort to keep the tiny Republic alive. In 1922, the League of Nations was called in and drew up a sound scheme of reconstruction. Under its plan, in place of the "bad debt" which had been wiped off by the Treasury, the British Government received bonds, the interest on which is sufficient to cover our share of the cost of the League.

Whatever may be written about the Far Eastern crisis, with which the League of Nations is still engaged, human memories are short if they have forgotten the many previous wars which were either stopped or prevented by the League—e.g., the Aaland Islands dispute between Sweden and Finland, the Corfu crisis between Italy and Greece, the Greco-Bulgarian frontier crisis of 1925, and the rest. Small wars these might have been in their early stages, but modern experience suggests they would probably have spread.

With regard to the Permanent Court of International Justice, there are not nine judges, as A. A. B. declares, but fifteen. If this number

includes only one Englishman, it is equally true that no country has more than one judge on the bench. Probably the reason why A. A. B. chose to mention the Cuban, the Chinese or the Spanish members was that these gentlemen sounded less impressive than the eminent French, German or Italian jurists also sitting on the Court. So far, more than forty international disputes, concerning Great and small Powers, have been successfully settled through its good offices. It is easy enough to write glibly about the dangers of "entrusting the decision of points of International Law that may vitally affect the destinies of the Empire," to this Court. Has Great Britain yet had cause to complain of the decisions which she has received at The Hague? Nevertheless, it is extremely unlikely that any more satisfactory or cheaper method could have been found of settling the Kiel Canal dispute with Germany, our quarrel with France over the conscription of British subjects in Tunis and Morocco, or the Mosul boundary dispute with Turkey.

Similarly, the statement that "the Americans pay nothing" does not bear close scrutiny. Whenever the American Government has taken part in League of Nations conferences or committee meetings, it has borne its full share of the expenses. Many of the health and social activities of the League have been largely financed by special grants of American money. From first to last, more than £1,000,000 has been received from governmental and private sources in the United States, which is roughly equal to Great Britain's total contributions to the League of Nations.



THE DISHONESTY OF THE UNITED STATES.

WHILST this country is straining and overstraining itself to pay America what that country claims to be her due, certain States over there have no idea of settling their just debts with us. Debts concerning which there is no doubt.

"Especial attention," wrote the *Times* on Budget Day (April 19) when so much money had to be agreed to for remittance to the United States, "is again paid by the Council of Foreign Bondholders to the default and repudiation by the State of Mississippi. This historic lapse on the part of a public borrower is dealt with in a separate pamphlet, which includes a chronology covering the period 1830 to 1930. The writer recalls the fact, which he thinks may surprise many present-day members of Congress, that in 1842 the Government of the United States was placed in the position of being unable to borrow money by reason of the repudiation of their public debts by certain of its component States. First and foremost among those States was Mississippi,

whose present political representatives, it is mentioned, took the lead in opposing any form of remission of debts due to the United States by European countries. In a reference to the old contention of the Federal Government that it is not concerned with the finance of the separate States, the Council asserts that any reason which may have attached to this contention in the past can scarcely be claimed for it to-day, since it has become the custom for money grants to be made from the Federal Treasury to subsidize public works in the several States. *While there is, of course, no exact parallel between the political systems of America and Australia, the action recently taken by the Federal Government of Australia in applying disciplinary measures to the offending State of New South Wales, offers a striking contrast to the policy of American Governments in regard to the defaults of the Southern States.*" (Italics ours.) To all of which we say Hear! Hear!!

MARKET REPORTS, GOSSIP AND PRICES.

THINKING of an agreement known as the Congo Basin Treaty, and the effect it could have of keeping low-priced Japanese cotton out of East Africa where our own product is being undersold, it may be as well to quote the following extract from *The Japan Trade Review* of Yokohama (Chamber of Commerce and Industry) for March.

"On the occasion of the General Elections which took place on February 20 the Seiyukai Cabinet scored an overwhelming victory to such an extent that the (Prime Minister or Premier) Inukai Cabinet has been able to carry out its economic and financial policy at least so far as the Lower House is concerned. The victory of the Government party appears to lie in part in the belief of the nation that days of greater prosperity would be forthcoming under the Seiyukai Cabinet, and the slogan "Inukai Prosperity" seemed to be quite influential in enabling the Government party to score its one-sided victory in the elections. . . . One of the ten major principles advocated by the Seiyukai lies in the five-year industrial programme aimed at the checking of imports and the fostering of exports, consisting of (a) lowering of production costs, (b) control of production, (c) protective tariff policy, (d) protective industry policy, (e) gold production policy, signifying an increased production policy of 821,000,000 odd Yen.

Mark those words "fostering of exports" and "lowering of production costs." If we and others are already feeling the pinch owing to the low cost of the Japanese goods, well . . . what about even lower costs and a greater export push?

Meanwhile watch Russia, she talks of an out-turn of 1,186,870 tons of raw cotton for her 1932-33 crop and threatens to be a serious competitor even at a loss as an exporter of cotton piece goods.

On the eve of the Budget, the *Times* reminded us, the amended Bill providing for permanent changes in the banking system of the United States, as that system is embodied in the Federal Reserve Act, was introduced in the Senate by Senator Carter Glass. In its original form the measure was considered by the banking community so restrictive, severe, and "deflationary" that the opposition was violent. The amended draft has, however, won warm professional approval since the removal, with the consent of its author, of such provisions in it as were inimical to an early business recovery. The Bill as it stands now, while perhaps not perfect, fulfils the real intent of Senator Glass and his sub-committee, which is to bring about wholesome improvements in American banking practice, and is no longer, as it was in its first form, an instrument of castigation. In its altered shape it has the approval of the leading bankers and economists of the country and of the Federal Reserve authorities.

Moving on to our usual market gossip, we come to:—

Cotton.

In face of what has just been said about the competition of the Japanese in East Africa, it is well to note that *Cotton* of Manchester looks upon the German mills as taking much business without profit to keep their plants going, whilst Japan finds her spinning industry to be losing ground with stocks and orders none too favourable to the mill owners. France, on the other hand, claims that her mills are gradually increasing their activity with yarn and cloth sales tending to run above production, and further improvement seems probable if helped by a favourable cotton market.

Regarding the raw material the news from America is not encouraging, and this seems likely to continue until it can be seen more clearly what the U.S. Farm Board intends to do and also how taxation will work out under the Budget that is to be balanced. Meanwhile the surplus supply of raw cotton seems to be moving with prospects of a smaller crop ahead. Nevertheless, the United States Farm Board has not yet announced its plans regarding the estimated 3,400,000 bales held by the Cotton Stabilization Corporation and the American Cotton Co-operative Association. This huge supply controlled by one unit must continue a menace to the markets, especially as the visible supply of American cotton on April 9 stood at 6,684,000 bales, against 3,491,000 in 1913, i.e., before the war.

A "bull" point is the claim that the sales of fertilizers are still fifty per cent. less than those of last year (was last year anything to talk about?) and the general backwardness of the coming crop increases the chance of insect damage.

Moving on to prices, the following were the official "Spot" prices in Liverpool on April 15 and on the corresponding dates in 1931, 1930 and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5.00*	4.73*	5.60*	8.50*	7.00†
Strict Middling American	5.05*	4.78*	5.75*	8.70*	7.10†
Fair Pernam	5.05	4.78	5.65	7.80	7.30
F.G.F. Sakel. Egyptian	6.60	6.55	8.80	13.80	10.00§
Fine Broach	4.71	4.48	4.57	6.15	6½
Fine No. 1 Oomra	4.57	4.34	4.17	5.50	6½
Fine Bengal	4.12	3.89	3.83	4.85	5½

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Vegetable Oils (London and Liverpool).

Liverpool found the palm-oil market dull at the end of the third week in April, with sellers of Lagos asking £15 10s. for April/May, against £14 15s. for Softs, £15 10s. for Mediums, £14 15s. for Red Sherbo—all April/May. These rates are £2 to £3 below those quoted a year ago.

Coming to oil cakes, one cannot help, with this class of cattle feed, thinking of the news on this side and from the Continent where (quoting from the Sugar Report of Messrs. Golodetz, of London, dated April 18), we are told, "With raw sugars, Continental Beet 88°, owing to the scarcity of this class of sugar, forged ahead with a substantial premium over cane, instead of being at a discount of 3d. to 3½d. per cwt. Just as remarkable is the fact that beet pulp, which serves as cattle food and which is normally an inexpensive by-product of sugar manufacturing, is now selling in this country at 6s. per cwt. ex factory or nearly 2s. above the price of 96° cane sugar. The superiority of pulp is a feature not only here but also in several countries on the Continent. In Germany not only pulp but sugar itself has in the past year been allotted in large quantities (over 100,000 tons) to use as feeding stuff for cattle. It is reported from Germany that Raws, second running, were sold not long ago for cattle food at Mk. 4.50 (about 5s. 9d. per cwt. basis 75 per cent.), which is certainly more than double what these seconds could fetch if sold to a refiner of sugar. This year the use of sugar in Germany for non-human consumption promises to be further extended, in view of the high prices realized in Germany for cattle food, which is there an import article. The new use made of sugar in Germany on such an extensive scale may even lead to a slackening of efforts to reduce the area of present sowings in that country." Going back to oil cakes, London made Linseed cake is quoted at £7 15s. to £8 ex mill, against £4 17s. 6d. for (London made) cotton cake and £3 17s. 6d. ex ship for Egyptian. Coconut cake is worth £7 ex mill, and English soya bean cake £8 2s. 6d. ex mill.

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTHSEAS F.M.S.
April	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	16 12 6	15 7 6	15 5 0	14 10 0	14 12 6
20	16 17 6	15 7 6	15 5 0	14 10 0	14 12 6
16	16 17 6	15 7 6	15 5 0	14 10 0	14 12 6
13	16 7 6	14 17 6	14 15 0	14 0 0	14 2 6
9	16 7 6	14 17 6	14 15 0	14 0 0	14 2 6

Malabar copra, f.m.g.w.s. £ N/Q. Rabaul Plantation f.m.s. £14 15s. on April 23rd.

COCONUT OIL PER TON.

Ceylon mill oil on April 23rd was quoted at £27 10s. for spot parcels, against £24 (cylinders) for shipment. English deodorized in barrels is worth £33 10s.

OTHER OILS PER TON.

	COTTONSEED			SOYA BEAN		PALM
	CASTOR FIRSTS	GROUNDNUT CRUDE*	CRUDE EGYPT	LINSEED SPOT†	SPOT, NAKED	KERNEI OIL‡
April	£ s.	£ s.	£ s.	£ s. d.	£ s. d.	£ s.
23	39 10	35 0	20 10	13 12 6	22 0 0	22 0
20	39 10	35 0	21 0	14 10 0	22 0 0	22 0
16	39 10	35 0	21 0	15 0 0	22 10 0	22 0
13	39 10	35 0	21 0	15 0 0	23 0 0	22 0
9	40 10	35 0	21 0	14 5 0	23 0 0	22 10

Soya Bean Oil. Oriental to the Continent, March-April is quoted £19 10s. in bulk.

* Crude, naked.

† Net, naked, ex-mill.

‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL)		COTTONSEED		SOYA BEAN	
	CALCUTTA	LA PLATA	EGYPT BLACK	CASTOR BOMBAY	GROUND- NUTS	MANCH AFLOAT
Apr.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	9 10 0	8 0 0	5 18 9	12 10 0	16 7 6	6 10 0
20	9 12 6	7 17 6	5 16 3	12 10 0	15 17 6	6 11 3
16	10 0 0	7 18 9	6 0 0	12 10 0	16 2 6	6 12 6
13	10 0 0	8 1 3	6 0 0	12 10 0	16 2 6	6 12 6
9	9 17 6	7 16 3	5 15 0	12 2 6	15 11 3	6 10 0

Desiccated Coconut.

This market, we are told, remains quiet, with spot sellers both for fine and medium at 25s. against April/May shipment at 21s. 9d. c.i.f.

Rubber.

The India Rubber World, in its February issue (p. 54), under the heading of "Manufacture of Du Prene" gives details, so far as the patent description goes to show, of "a practical method of making synthetic rubber, the finished product of which, it is claimed, may be treated in the same general manner as raw natural rubber." One wonders rather what the newcomer costs to produce. Can it, for instance, sell in America or the U.K. against real rubber at present prices?

On p. 56, our same contemporary gave a detailed table (which we have to condense) showing that against her deliveries for consumption of 349,000 tons in 1931, 376,000 in 1930, and 470,000 tons in 1929 (see TROPICAL LIFE, p. 55, March issue), and with her present (March 31) stock, on land and afloat, of 378,756 tons, against 280,934 tons last year, she still manufactured in a year (we take it to be 1931, but the date is not mentioned anywhere) crude rubber to the tune of 517,533 tons plus 230,822 tons of re-claimed. Where did so much crude rubber come from? Do Uncle Sam's imports and stocks lead one to believe that she made up so much crude rubber in a year? Here is the table:—

TABLE I.—ANNUAL CONSUMPTION OF MATERIALS BY THE RUBBER INDUSTRY OF U.S.A.

	LONG TONS
Crude Rubber	517,533
Reclaimed Rubber	230,822
Tyre Fabrics	140,029
Carbon Black	84,444
Zinc Oxide	66,838
Caustic Soda	40,000
Kaolin (Clay)	34,296
Other materials	153,875

Total of Rubber, &c. 1,267,857

With tyres the percentages of costs are returned as being: Labour and overhead charges, 50.9 per cent.; cotton fabrics, 23 per cent.; crude and reclaimed rubber, 16.8 per cent.; compounding ingredients, 7.3 per cent.; wire, 2 per cent. The tyre trade therefore as a customer of raw rubber seems to be useful to the extent of 40 per cent. only in weight (if as much, for all those 1,267,857 tons are not rubber) and about 10 per cent. or 12 per cent., out of 16.8

per cent. at the most, for hard cash in exchange for the raw rubber. Take one more item for those who are fretting throughout the world over the cost of tyres against current values of raw rubber, to realize where the costs go in distribution, overhead charges and profit against the cost of labour and materials. The first three eat up 45.4 per cent., labour 8.5 per cent., and materials 46.1 per cent. We have always claimed, both with cars and tyres, that the distribution costs of to-day are much higher than they need be and should be. They are therefore dead against the interests of the rubber grower on the one hand and the consumer on the other.

As we are told that a world census of registered motor vehicles shows approximately that 35,000,000 vehicles are a wheel (27,000,000 in U.S.A. and 2,000,000 in the U.K.), one cannot help feeling that even a small reduction in the cost of sales and distribution would mount up tremendously in the course of a year.

Coming to London and current news, Messrs. Lloyd, Matheson and Carritt report that during the week ended April 20 the rubber market, after advancing $\frac{1}{8}$ d., eased down owing to disappointment over the American consumption figures and stood at $1\frac{7}{8}$ d. for sheet and $2\frac{7}{16}$ d. for crepe. During March America speaks of having consumed 27,828 tons, against 30,000 tons in February and 32,790 tons in March last year. The stock on March 31 has already been given, i.e., 378,756 tons for stock and afloat.

With regard to values, these, Messrs. Lloyd, Matheson and Carritt tell us, ruled as under:—

SPOT QUOTATIONS—	1932 APR. 20TH		1932 APR. 13TH		1932 APR. 6TH		1931 APR. 22ND	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	$1\frac{7}{8}$	0	$1\frac{7}{8}$	0	$1\frac{1}{2}$	0	$2\frac{7}{8}$
Crepe (F.A.Q.)	0	$2\frac{7}{16}$	0	$2\frac{7}{16}$	0	$2\frac{1}{16}$	0	$2\frac{1}{16}$

FORWARD POSITIONS—	APR. 20TH		APR. 13TH	
	SMOKED SHEET	CREPE	SMOKED SHEET	CREPE
	s.	d.	s.	d.
1932, April	0	$1\frac{7}{8}$	0	$2\frac{7}{16}$
„ May	0	$1\frac{7}{8}$	0	$1\frac{7}{8}$
„ June	0	$1\frac{7}{8}$	0	$1\frac{1}{2}$
„ July/September	0	$1\frac{1}{16}$	0	2
„ October/December	0	$2\frac{1}{16}$	0	$2\frac{1}{16}$
1933, January/March	0	$2\frac{1}{8}$	0	$2\frac{3}{16}$

STOCK—	1932		1931	
	TONS		TONS	
London, Week ending, April 16th	63,717		85,704	
Liverpool „ „	61,302		51,221	
Total	125,019		136,925	

SINGAPORE QUOTATIONS—

April 20th.—Spot, $5\frac{3}{4}$ cents; July/September, 1932, $5\frac{7}{8}$ cents; October/December, 1932, $6\frac{1}{4}$ cents.

April 13th.—Spot, $5\frac{5}{8}$ cents; July/September, 1932, 6 cents; October/December, 1932, $6\frac{3}{8}$ cents.

Balata.

Remains unchanged with West India sheet on the spot quoted at 1s. 8d., against 1s. 6d. c.i.f. (sellers) for shipment. Venezuelan Block is nominally valued at 10d. spot against 9d. c.i.f.,

whilst the value of Iquitos is quite nominal at 3d. to 4d., against 11d. to 1s. for Panama, both spot.

Coffee.

The statistical section of the Department of Agriculture, Kenya Colony, in their crop return for February, speaks of a coffee estimate for the current year of 159,295 cwt., or 1,440 cwt. less than the output of their last crop. Coming from 99,440 acres (under coffee) such an output, of course, works out roughly at $1\frac{1}{2}$ cwt. per acre.

The Tea and Coffee Trade Journal for March starts with an illustrated article on the Jubilee of the New York Coffee Exchange, which started in March, 1882. In 1914, sugar was introduced making the concern then known as the Coffee and Sugar Exchange. The half-century seems to have had a steady run of utility, growth and progress all round. A second article tells of the 600 members' dinner (with guests) at the Waldorf-Astoria to celebrate the birthday. Further on are the speeches delivered by Dr. Numa de Oliveira and others at the dinner given by the Brazilian-American Coffee Promotion Committee, in his honour, concerning his visit to America to explain the proposed method of working the Brazilian National Coffee Council's Programme of which Dr. Marcos de Souza Dantas is president (in Brazil). Dr. de Oliveira represents the Schröder banking interests in Brazil and is looked on as Sao Paulo's most distinguished financier. For ten years he was Director of the Banco do Comercio e Industria de Sao Paulo. Whether he is so still we are not quite sure, but fancy he has spread his wings since then.

The public coffee sales held during the week ending April 16, realised full rates for the better grades, but those below the mark did not meet with too warm a welcome and were at times sold cheap or retired. There was a good assortment of East Indian kinds on offer, prices for which ran as shown a little further on. Sales made included:—

Jamaican, good bold, mountain grown, blue 205s., seconds 182s., thirds 142s. 6d., peaberry 190s.

Kenya.—Smalls 50s. to 57s. 6d., and 63s. 6d. to 78s.; seconds 74s. 6d. and 79s. to 84s.; bold common 80s. to 110s. 6d.; fair 101s. 6d. to 109s. and 113s. 6d.; peaberry 80s., 95s. to 110s., 115s. to 123s. 6d., 125s. and 129s.

Tanganyika.—Smalls 44s. 6d., 62s.; seconds 60s. 6d. to 62s. and 71s.; bold common 70s. to 75s.; peaberry 80s. to 90s., 105s. 6d.

Uganda.—Mixed brownish 52s.; bold Robusta 48s. 6d.; medium 43s. 6d. to 45s. 6d.

Toro.—Bold brownish 55s. to 62s.

Of East India kinds:—

Mysore sold bold greyish and greenish 120s.; peaberry 106s. 6d. to 110s., and 120s.

Coorg.—Bold 94s. to 100s.; good bold greenish 106s. 6d.; seconds 78s. 6d. to 80s.; smalls 70s.; peaberry 96s. to 115s.

Shevaroy.—Bold greenish 124s. to 133s. 6d.; bold medium 104s. 6d. to 113s.; medium 101s. to 103s.; peaberry 118s. 6d. and 120s.

Nelliampathy.—Medium greenish 87s.; bold good greenish 105s. 6d.; seconds 86s.; peaberry 112s., and 118s. to 120s.

Neilgherri.—Medium 97s.; good bold greenish 121s.

Costa Rica.—Bold common greenish 90s. to 106s., and 98s. to 111s.; fair 109s. to 131s. 6d.; good 137s. 6d. to 140s. 6d.; fine 143s. to 144s., and 148s. to 153s. 6d.; seconds 72s. 6d. to 120s. 6d.; small 60s. to 66s.; Maragogipe 140s.; peaberry 91s. to 166s.

Other Products.

COMING to the more general market reports, Tea is having to shake its feathers and settle down to work again with a duty of 2d. lb. on British teas and 4d. on foreign grown. The large stocks which flowed into this country mainly to avoid the duty have to pay 2d. lb., British or otherwise unless owners' individual stocks do not exceed 1,000 lb. After all this was known the auctions went off very much as they did before April 19, which was Budget Day. Indian kinds ruled steady for coming grades, rather easier for mediums, but firm for fine. Ceylons met an active market and her teas sold at firm rates, Java and Sumatras met with a fair demand with full rates for fine grades, but the lower qualities did not do so well. Moving on to fibres, Messrs. Wigglesworth and Co. speak as follows of the British grown sisal markets, against reports of considerable sales of Mexican below competitive values: "Following the introduction of the Import Tariffs Bill the demand from U.K. buyers for East African sisal has proved the brightest feature of the market enabling shippers to contract ahead in larger volume than hitherto. Most tempting offers of other sisals have been put before the U.K. spinners, in one case duty paid, but manufacturers have shown the utmost desire to give effect to the Empire movement in covering their requirements with the East African product. This has to a large extent offset an almost entire absence of demand from U.S.A. for supplies for the coming harvest. A moderate seasonal demand has been met on the Continent.

"The market during the month has remained firm with little or no change in prices, being governed largely by lack of offers, particularly of parcels afloat unsold. This position undoubtedly reflects the heavy drop of about 40 per cent. in exports from Kenya and Tanganyika for January last compared with December, 1931, and is the inevitable result of uneconomic prices, forcing estates to curtail or close down their production.

"The market closes firm but quiet on the following levels:—

No. 1 Good marks	£14 15s. to £15	per ton
No. 2 Good marks	£14 to £14 5s.	"
No. 1 F.A.Q.	£14 10s.	"

C.i.f. European ports, according to standard and shipment position."

Against this, the Jute market continues to be dull, the pressure to sell and lower quotations from Calcutta all helping to depress the market. Quotations include £16 2s. 6d. for Firsts, c.i.f. to the Continent, against £19 10s., our quotation at the end of January. With Manila Hemp J No. 2 is quoted at £18 5s., against £19 the month before; K is 20s. lower at £17; whilst M No. 1 is quoted at £15 10s. only, against £17 and £18 5s. in February, all c.i.f. Shellac on the spot is worth 60s. for TN, 70s. to 150s. for Fine Orange, 67s. 6d. for AC Garnet, and 80s. for RLI Button, against 65s., 80s. to 160s., 72s. 6d. and 85s. respectively the month before. Palm Kernels at £10 15s. to Hamburg are 20s. lower.

Coming to metals, Tin is reported to be firmer, with sellers holding their hands, and business has been done up to £112 5s. after being on a higher basis. All this, of course, is much below the mid-February rates of £131 or January, when the price for spot was £140. Copper also has been much lower than it was a month ago, being now, in spite of a firmer market and some demand, quoted only at £30 10s., against £33 12s. 6d. in February and £38 10s. in January.

Coming to finance, much of course has happened since our last appearance and will continue to happen in this market, and, through our influence, elsewhere. The Bank Rate to begin with was dropped to 3 per cent. on April 21, and it is said that it is only a matter of time as things are at present before it goes to 2½ per cent. It is claimed that we are in for a period of cheap money, which favours the Government's wish to convert current loans and make our returns therefrom lower, whilst still paying War Rates to America. At the same time cheaper money should stimulate trade if a brake can be put on kite-flying and inflated prospectuses. To have a 6 per cent. Bank Rate halved within two months is indeed unusual. May we all have better luck since it is so. Amsterdam has also lowered her rate from 3 per cent. to 2½ per cent., together with Milan from 7 per cent. to 6 per cent. and Berlin first from 6 per cent. to 5½, and now to 5 per cent. We have had therefore many changes. Paris remains at 2½ per cent., New York at 3 per cent., and the Swiss Banks at 2 per cent. Bar silver is now 17d. and gold 109s. 11d. This makes our table work out thus:—

APRIL 23RD	1932	1931	1930
Bank rate	3 per cent.	3 per cent.	3½ per cent.
Consols 2½ p.c.	60½	57½	55½
Bar silver per oz.	17d.	13½d.	19½d.
Exch. on New York	\$3.74½	\$4.86¼	\$4.86¼

THE WORLD'S COCOA MARKET.

BY THE CONTROLLING EDITOR

THE Address delivered by the Governor of the Gold Coast to his Legislative Council on March 1 should be fully and freely circulated, especially among anyone interested in raw cocoa. Between the changes in the American import laws and the effect it will have on the Gold Coast output in particular, the remarks made by H.E. offer much useful information to those anxious to walk along the new "paths" without being "stung."

One item that has its use in estimating the cost of production and living to the small proprietor is the claim that the net taxation, in the Gold Coast, per head of population works out at 13s. 4d. and not at a considerably higher figure, as some have spoken of. To begin with, 3,000,000 people are balanced against £2,178,566, so that, to begin with, is under 20s. per head. From this the Post Office and other revenues are deducted, being services rendered and paid for, so that when the taxation pure and simple is arrived at that, claims Sir Ransford Slater, is under 13s. 4d.

Those who like to have correct statistics and keep them up to date, will be glad to have the following table to work from. At the same time even buyers must "raise their eyebrows" at the fall in values, although, of course, they knew that they have been dropping for some time. By sea, the exports for 1931 amounted to 237,534 tons, to which must be added 6,560 tons sent overland (to French Togoland to come out *via* Lomé). In 1930, the hold-up year, the actual figures were 186,772 tons by sea plus 3,808 overland, making 190,580 tons returned as 191,000 tons in the following table. Adding the overland movements in each case, the last ten years' exports (and values) work out as under:—

EXPORTS OF COCOA FROM THE GOLD COAST.

	TONS	£		TONS	£
1922	159,000	5,841,000	1927	210,000	11,728,000
1923	198,000	6,567,000	1928	225,000	11,230,000
1924	223,000	7,250,000	1929	238,000	9,704,000
1925	218,000	8,222,000	1930	191,000	6,970,000
1926	231,000	9,181,000	1931	244,000	5,493,000

Looking at these figures and bulking the last two years together—when they average 217,000 tons—the report rightly assumes that "it is difficult to resist the conclusion that the peak year of exports from the Gold Coast has been passed." What higher level of values, if any, would bring about an increased output and whether such increase would come from the better cultivation of old lands, a more thorough "comb out" of all the cocoa produced, or from new lands that the better values would call into cultivation (perhaps to yield just when another slump is on) remains to be seen. An average of 217,000 tons for 1930 and 1931 is certainly a big drop from the figures of 1929 or 1926.

Planters elsewhere can note that the Agricultural Department (of the Gold Coast) has direct evidence from figures compiled that yields per acre decline by about one-quarter to one-third in the course of 25 to 35 years of farm life. This causes one to ask, Are prices likely to rule high enough to cause new areas to be planted? If not, how long will it be before a marked drop in the Gold Coast will have to be faced through this drop in the output of the older farms if there are no fresh areas to take their place?

In the same way as 1931 saw Bahias at the head of the list of growths imported into America, Holland last year headed the list of countries receiving cocoa direct from the Gold Coast. Subsequent reshipments of much of this cocoa will not alter the above fact. The U.S.A., for instance, both last year and in 1930 by no means occupies the position her ultimate receipts would lead you to look for. Here are the figures:—

DESTINATIONS OF GOLD COAST COCOA.

	1931 TONS	1930 TONS
Holland	61,828	39,753
U.K.	56,065	42,486
U.S.A.	55,469	37,129
Germany	50,812	56,285
Elsewhere	13,360	11,119
Total	237,534	186,772

The New U.S. Import Law.

Under the previous law 7,527 bags were absolutely refused admittance into America in 1930, but only 937 bags in 1931. In face of the new and more stringent regulations now in force and yet to become law, this big drop is indeed a matter of congratulation to the Gold Coast. Whether countries other than America have had to receive what was not considered good enough to be sent to Uncle Sam plus what did go, as above, and was rejected, we leave our readers to find out. As time goes on, however, one feels, certainly one hopes, that the entire output of the Colony has been raised whereby we, or others, will receive decreasing quantities of cocoa that cannot enter America.

Regarding the quality of the cocoa for the past four crops, the following table shows the quality to have remained fairly even, but the last season's output has, so far, headed the list. We will give details of last year's returns to show how the total percentage is arrived at, viz.:—

CACAO CROP, 1930-31.

Tons	Mouldy	Germinated	Weevily	Slaty	% of defects	% purity
217,713	3.7	2.3	1.0	4.6	0.8	= 89.1%

In 1929-30, 87.7 per cent. was the total; 1928-29, 88.4 per cent., and 1927-28, 88.5 per cent. With such returns, the proportion of the Gold Coast crop eligible to enter the United

States, under present and future regulations, works out thus on export of 217,735 tons:—

	TONS ADMISSIBLE	TONS EXCLUDED
Regulations to April 1st, 1932	205,240=94.3%	12,495= 5.7%
Regulations after April 1st, 1932	200,723=92.2%	17,012= 7.8%
Regulations in 1933	173,072=79.5%	44,663=20.5%

Good mathematicians will, no doubt, make the above figures come all right, but we cannot. In the single line on p. 98, surely the percentage of purity should work out at 87.6, whilst the table that follows makes our figures still more wrong.

Then follows pp. 36 and 37, which are important but must be allowed to pass here except to say that cocoa on the Coast certified after inspection, received an average premium last year of 15d. per load of 60 lb., or 47s. per ton. This is highly satisfactory, especially when certified cocoa will always attract buyers as a rule more easily than other kinds.

Board of Trade Returns for March in U.K.

One rather hoped that the increases in our deliveries for consumption during January and February would continue into March, but that was not to be. During that month we took into consumption only 7,411 tons, against 10,463 tons in 1931 and 4,616 tons in 1930. This does not say, of course, that 7,411 tons is not a very good delivery, only that it fell below the returns for March last year. Coming to the full table for the three months, this works out as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY—MARCH.

RAW COCOA ONLY	LANDED	INCL. B.W.A.	DEL'D. H.C.	EXPORT	STOCK MAR., 1931
JAN.-MAR.	TONS	TONS	TONS	TONS	TONS
1930	33,612	30,205	12,945	597	50,750
1931	35,713	33,068	19,604	1,148	42,850
1932	40,442	36,599	21,781	790	46,700

Inc. 4,729 Inc. 3,531 Inc. 2,177 Dec. 358 Inc. 3,850

Market Gossip.

Now the Budget is known, it will be interesting to see how deliveries and, through that, how the demand for cocoa will continue. The weather certainly is doing and has all along done its best to help. With the cold, the biting wind and everlasting rains, conditions have been ideal for large consumption in every household.

Bahia and other centres are watching to see the extent to which the Gold Coast will develop its gold industry. One company, of course, is doing remarkably well and, with gold still up in value, the many improvements introduced via South Africa to aid the recovery of gold from its matrix, is causing many of us to believe and still more to wonder whether the Colony can come forward more prominently as a producer of gold. Whilst writing these notes certain Mem-

bers of the House of Commons are, according to the *Morning Post*, intending to call official attention to the possibility of developing the gold resources of the Colony and the Press agrees that a systematic development should be started. The Government will be urged to encourage an increase of the gold production of the Gold Coast by every means in its power, including the extension of credits for the purchase of machinery. If Great Britain, it is argued, can afford to give big credits to Soviet Russia it cannot reasonably withhold them from a Colony.

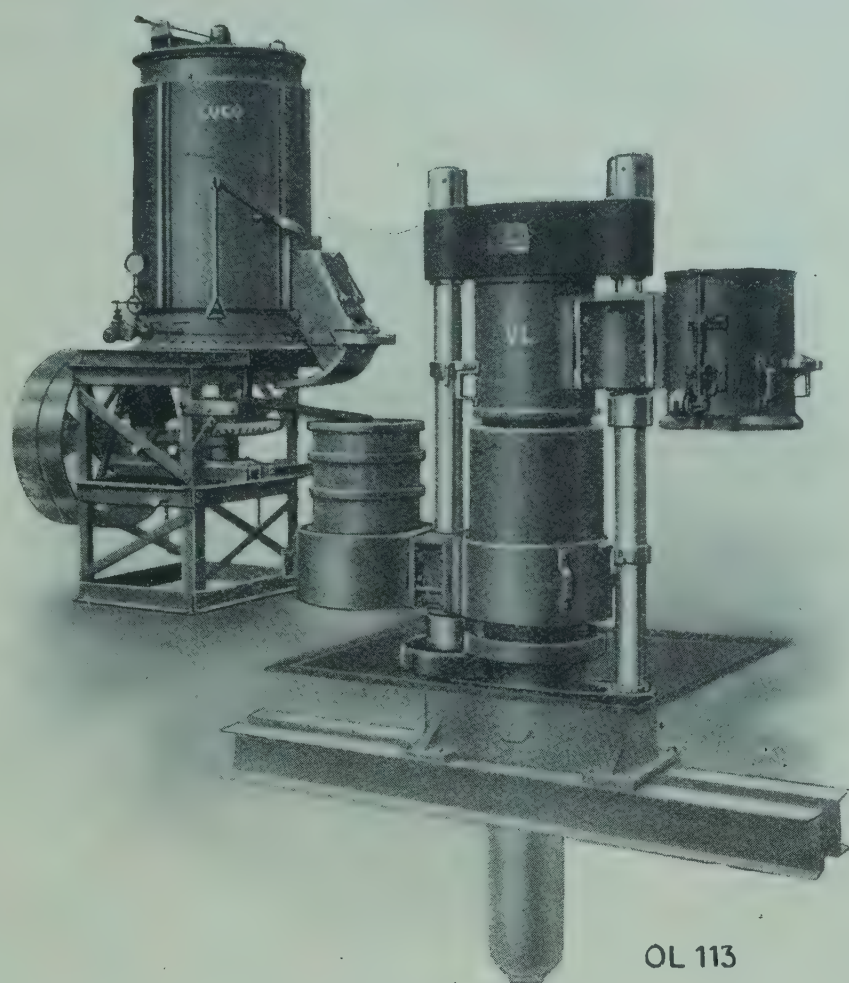
Those producing cocoa against the Gold Coast wish such a movement every success. It is felt that a widespread development in connection with gold and the other resources of the Colony will draw labour away from the cocoa areas because, even if the women and children can be left to carry on the plantations whilst the husbands are absent, further planting is certain to be discouraged. Furthermore, were there to be anything like a broadcast demand for miners with (to such folks) good pay, cocoa, even at 50 per cent. above its present range of values is certain, it is felt, to be pushed right into the background. Will such things be?

With 19,547 tons exported from the Gold Coast during March that centre shot ahead of the two previous crop seasons so far as the first half of the year is concerned, the figures being as follows:—

FIRST HALF OF CROP YEAR.—GOLD COAST EXPORTS.

	1931-32 TONS	1930-31 TONS	1929-30 TONS
October	5,598	11,251	15,634
November	18,856	15,031	34,537
December	35,896	13,661	29,563
In 3 months	60,350	39,943	79,734
January	42,360	25,942	34,659
February	40,455	41,720	19,078
March	19,547	41,659	21,201
In 6 months	162,712	149,264	154,672

As regards consumption, those who talked of the United States as being likely to receive 400,000 bags from the Gold Coast alone during March (basing their estimate on the rush to get in before the new regulations of April 1) may yet prove to be right if 100,000 bags were unable to get through in time. Under the circumstances such a quantity could quite well be on the way or held up, like the camel that could not pass through the eye of the needle, and so remained afloat. Meanwhile, after receiving no Ivory Coast cocoa during January and February, Uncle Sam received nearly 49,000 bags in March, and, as the following table shows, out of 1,320,216 bags received in the three months British and French West Africa supplied 841,666 bags, or very nearly two-thirds of the total. Add in the Bahias and then you can see that the rest of the cocoa producing world sent America 166,000 bags during the three fattest (importing) months of the year.



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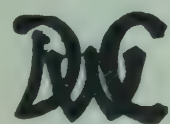
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Ivory Coast	48,744	16,327	48,744	71,024
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Venezuela	13,669	19,753	24,050	37,114
Guayaquil	3,854	5,978	18,855	17,258
Sanchez	18,731	8,520	46,859	35,282
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All others	8,516	12,705	25,156	29,015
Totals	623,509	305,041	1,320,216	760,700

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	s.	d.	s.	d.	s.	d.	s.	d.
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„ 18th	25	10½	26	3	26	6	26	6
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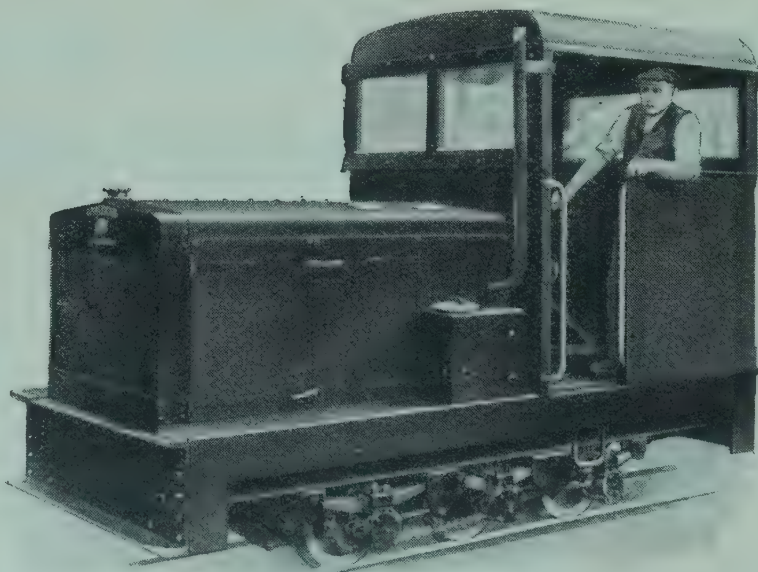
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DIESEL
LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ „
20/35	4 „
40/50	6 „
40/50	8 „
40/50	10 „



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ „
20	2½ „
20	4 „
27	5 „
50/70	10 „

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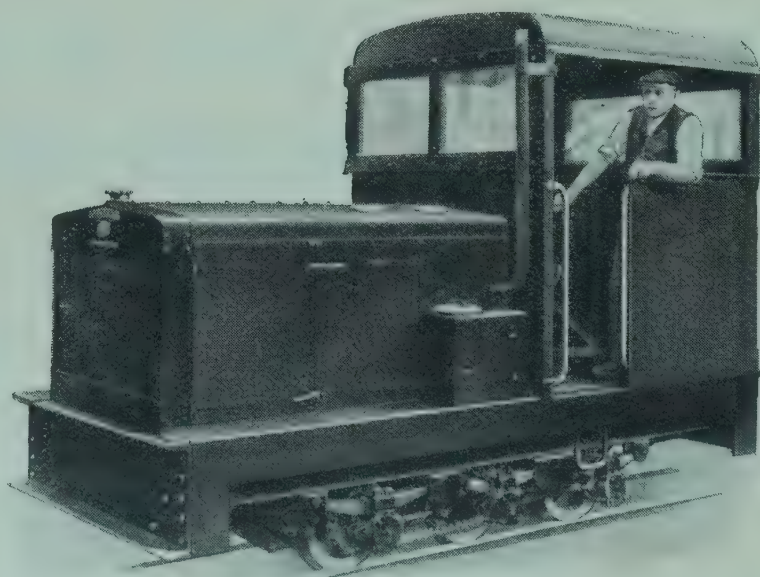
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STANDARD MODELS

Horse-power	Weight
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20/35	4 „
40/50	6 „
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The Department of Overseas Trade has issued Report No. 510, on "Economic Conditions in the West Indies," drawn up by Mr. J. L. Wilson Goode, our Trade Commissioner at Port of Spain, Trinidad, W.I. It runs into 107 pages and costs 3s. net from Adastral House, Kingsway, London, W.C.2, and the usual Government sales centres. Dated January, 1932, it follows on the previous report dated October, 1930.

* * *

On p. 7, manufacturers and export merchants are strongly advised to exercise extreme caution in dealing with firms of whom they have no knowledge. Careful inquiries should be instituted before shipments are made, otherwise severe losses may be incurred. This, whilst quite necessary, may leave an unpleasant flavour in one's mouth, so let us hasten to add the following unofficial comment, viz., the firms that are good can be very, very good and those who are not can be horrid. We are speaking from bitter experience culled not from this side but when learning storekeeping on the spot in the West Indies. We would add that the worst offenders in our case were not West Indian born. With tropical products at their present basis of values, however, considerable patience and cuteness are necessary to help clients liquidate their debts, and this is likely to be the case for some time.

* * *

The table below from p. 12 attracted our attention. It is followed in turn by a paragraph giving further details from which we will borrow the following. Jamaica has 81,849 acres under bananas, 8,681 under sisal and 6,668 acres under coffee, including, of course, their world famous (but shrinking) area of Blue Mountain coffee. The Bahamas have 5,880 acres under sisal. Jamaica has 1,036 acres under citrus fruit, and Trinidad 1,000 under limes plus 400 acres under grape fruit. Now for the table:—

APPROXIMATE ACREAGE UNDER THE FOLLOWING CROPS.

	SUGAR ACRES	CACAO ACRES	COCONUTS ACRES	COTTON ACRES
Jamaica	44,847	2,927	40,271	—
Trinidad	44,000	209,000	50,000	—
British Guiana	57,244	1,438	26,665	—
Barbados	35,000	—	—	2,500
Antigua	9,935	—	—	1,500
St. Kitts	6,500	—	700	1,400
Nevis	—	—	—	1,500
Montserrat	—	—	—	4,079
Grenada	—	32,500	—	—
St. Lucia	4,300	6,000	2,700	—
St. Vincent	—	—	—	3,955

* * *

When writing last month about the Seiyukai (Conservative) Cabinet and Premier Inukai's victory at the Japanese elections in February,

we little dreamed that in this, the very next issue we should have to speak of the death—by assassination—of this distinguished statesman. Following so close to the assassination of President Doumer, one must indeed feel that the world is out of joint and wonder how and when it can be persuaded to work more happily and evenly again. Of one thing we are certain, viz., making a big noise after atrocious deeds have been committed not only does no good, but tends rather to parade your impotency before those working against you, and that does harm. The quiet way in which France and Japan have met their blows creates greater confidence as well as greater regret that we, their fellow workers in other countries, cannot help them. Whilst sympathizing with them over their losses, we must congratulate them on the plucky, quiet way they set to work and have smoothed over their great troubles, Japan, in particular, has been hard hit by murders and sudden death and damage through earthquakes, &c.

* * *

Whilst the "White Horse Inn" at the Coliseum Theatre, whilst still going vigorous and strong, has had to give way to "Casanova" (known to many as the Great Lover), which seems likely to prove an equal success, another musical romance which left nothing to be desired in the way of its cast and staging, has been withdrawn after a three-night run. Why so? Why again, including the above, have six plays been withdrawn, after a total of twenty-six performances, making an average of very little more than four nights each, and two more plays averaged fourteen performances between them? On the other hand, note the long runs of many plays, including "White Horse Inn," which has been running for over a year with twelve performances a week without outstaying its welcome.

* * *

The Annual Report on the Experimental Farms in Bihar and Orissa (Patna, India) during 1929-1930 has come to hand, having been recently issued, probably in December last. Priced at Rs. 6, the report covers 390 pages, and can be had from the Superintendent, Government Printing, Gulzarbagh P.O., Bihar and Orissa, India, from the usual book-agents in India, and from the Office of the High Commissioner for India, India House, Aldwych, London, W.C.2. The book is made up mainly of tables, but the printed information which cause those tables to be drawn up will be found most useful, especially for countries now trying to bring their agricultural industries more up to date and at the same time making the best of the brains and physique of the present workers and of the aids to a rather primitive form of culture at their disposal.

throughout these territories at the moment. I just escaped a swarm covering forty square miles as it passed close to my maize crop last Sunday (April 10). These are of the graminivorous type which mops up hundreds of acres of maize in its younger stages in about twenty or thirty minutes, as the locusts pass along."

On April 25, reports from Cape Town spoke of a cloud of locusts, 500 miles in width and stretching 1,500 miles to the rear of the first line, as advancing irresistibly at the rate of a hundred miles a day on South and West Africa. Yet all that the authorities can do is to wait until the locusts begin to breed and then attack the swarms individually. Who can suggest more satisfactory remedies. One day, everyone must hope, a means will be found to destroy a useful proportion of such clouds by sprays from aircraft sent up to meet them as if they were enemy aircraft in war time. Can it be arranged

the *Zululand Times*, "is now general; the position of the unfortunate settler, bad enough in every respect, is being made infinitely worse by the loss of stock through contracting nagana. If big game is, as frequently claimed, such a big national asset, and must stay, then the Government should consider the buying out or other compensation for the settlers. With this terrible pest there is a chain of causation: (1) the host, i.e., the big and wild game, (2) the carrier, i.e., the tsetse fly, and (3) the victims, i.e., domestic animals. Break that chain and nagana will come to an end. The whole subject is "terrible large." Mr. Alex. Livingstone writes with emphasis and apparent knowledge of the subject in the *Zululand Times*; we only wish that we had space enough to introduce and properly discuss the whole matter in our columns. We all know the scourge of the Tsetse Fly, but not everyone is aware that so



Mr. J. C. MOORE SEATED ON A "MASSEY-HARRIS" DISC HARROW CULTIVATOR.

From our limited knowledge of the effects that sleepy-sickness has upon animals, we feel that all those in the photograph are suffering from it.

for a fleet of air sprayers to manœuvre above the locusts and eject fluid over them without harm to people, crop, &c., on the land below?

Next month we are returning to the subject in order to discuss the *pros* and *cons* of flame-throwers and also the use of fresh sisal juice, a pungent and penetrating acid for spraying over or otherwise attacking the locusts, especially the hoppers.

* * *

Nagana, trypanosomiasis or sleeping sickness seems to be adding considerably to the other troubles of Mr. J. C. Morris, our sisal friend in Hluhluwe, Zululand. According to his letter and press cuttings, tsetse fly and nagana and their host, the big game of the country, are Zululand's great problem. "Nagana," shouts

long as the wild game roams the land that scourge will not only continue but become worse. What remedy can we look for? There are several, but all cost large sums and cover vast areas, so that individual districts fear they may have to pay the share of others whilst gaining no permanent benefit, since, unless all keep their areas cleared, no one can hope to do so for long.

Next month we hope to publish in the sisal section a carefully thought-out consideration, from the pen of "Our Friend" on how best to develop and safeguard the sisal industry throughout those areas under his charge, being a review of the situation which we are sure all will welcome.

When Lightning Strikes an Air Liner.

THE Aeronautical Correspondent of the *Morning Post* deserves praise for the way in which he described the effects of a full shock of lightning on an air liner. It appears that shortly after leaving the air port at Croydon (in the huge field "next door" to where these notes are being written) at 12.30 midday on Monday, May 9, the air liner "Horatius," piloted by Mr. O. P. Jones, was struck by lightning.

An explosion, we are told, occurred in the front cockpit, blowing out eight windows, wrenching the bulkhead out of position and forcing the door back. All four air screws were damaged, the bottom two seriously and a gash two feet long was made in the fuselage abaft the front passengers' compartment. There were thirteen passengers aboard and a crew of four. The actual start was made at 12.35 and at 12.43 the long wireless aerial was run out from the aeroplane. An instant after, watchers on the control tower at Croydon noticed a blinding flash from the cloud into which the machine had disappeared. At the same instant, wireless communication was cut off.

What had happened was that the lightning had struck the aircraft somewhere on top and had rushed to the wireless apparatus, completely wrecking it and causing an explosion which blew out the windows of the cockpit. The wireless aerial was fused and fell from the machine. The passengers also saw a blinding flash and felt immediately a violent vibration. This, it was afterwards discovered, was the result of the breakage of the two bottom air-screws. Immediately after the machine had been struck Mr. O. P. Jones passed a message to the passengers to reassure them, and turned the machine about and flew back to Croydon, where he landed without further trouble. Eight of the passengers immediately re-embarked in another machine of the same type, again with Mr. Jones at the controls, and set off to the Continent. The other five decided not to go.

The reason, it is explained, why the machine did not crash was on account of the metal parts being "bonded" or metallically connected, which should be done with all metal parts of modern aircraft. Doing so causes the machine to become in effect a large conductor for the electricity and this bonding usually acts as a safeguard against fire or other damage when a machine is struck by lightning whilst in flight.

Other aircraft, including a Graf Zeppelin have been struck, and the Zeppelin escaped injury, it is considered, owing to the effective bonding of its metal parts. Apart from certain well-known cases, in which life was lost, there have been but few other instances, and most of them tend to

show that an aeroplane which has the metal parts bonded is fairly safe in a storm, and that it can be struck by lightning without crashing.

The Manuring of Sugar Cane.

ACCORDING to Mr. E. J. R. Barke, chemist in charge of the sugar-cane experiment station at South Johnstone, Queensland, experimental work carried out showed the following results—as to the optimum quantities of nitrogen, phosphoric acid and potash to be used.

In this experiment, a good crop of Mauritius bean was ploughed under in May, and the land afterwards ploughed and harrowed twice, the cane being planted in August, 1930. The plots were treated respectively with 100 lb. and 200 lb. sulphate of ammonia, 300 lb. and 600 lb. superphosphate, and 100 lb., 200 lb. and 300 lb. muriate of potash per acre. The summary of results was as follows:—

	SULPHATE OF AMMONIA	
	100 lb	200 lb.
Cane, tons per acre	48.29	49.15
Cane, percentage of mean yield	99.1	100.9
C.C.S., in cane	16.31	16.30
C.C.S., tons per acre	7.88	8.01
C.C.S., per cent. of mean yield	99.1	100.9

SUPERPHOSPHATE		MURIATE OF POTASH		
300 lb.	600 lb.	100 lb.	200 lb.	300 lb.
47.48	49.96	48.42	48.83	48.92
97.5	102.5	99.4	100.2	100.4
16.36	16.25	16.25	16.27	16.38
7.77	8.12	7.87	7.94	8.01
97.8	102.2	99.1	100.0	100.9

C.C.S. = Commercial Cane Sugar, i e., the basis on which the farmer receives his payments.

An attempt was made primarily to determine the optimum economic dressing of potash on this soil type, when heavy dressings of nitrogenous and phosphatic fertilizers are applied. The summary of results show that 100 lb. of muriate of potash per acre gave practically a maximum yield; the increments for the increased dressings, though definite, were very slight. The result from a double dressing of superphosphate (600 lb. per acre) as against a single one (300 lb. per acre) is most marked. The increase (2.48 tons cane) is in accordance with our findings in the past. Following a heavy crop of Mauritius beans which was ploughed under prior to planting, the response to added dressings of sulphate of ammonia is small, as would be anticipated. However, the increase due to the double dressing (0.86 tons cane) paid the cost. The ratoons from this trial should yield very interesting returns.

Next month we hope to be able to discuss the "Manuring of Sugar-Cane in Bihar and Orissa." There is, however, such a mass of matter to work upon that we are almost afraid to start. All the same, we shall try, both to start and finish.

Stockfarming Section.

Cattle in India.

AT Sepaya, the central farm in the north Bihar range; the work of the experimental farm, we are told by Mr. A. P. Cliff, Deputy Director of Agriculture, the same as the three smaller ones, is based on the following objects:—

- (1) improvement of seed;
- (2) determining the suitable artificial manures to supplement the deficit of cattle dung manure;
- (3) devising implements for better cultivation and reduction of the cost of production;
- (4) improvement of cattle for both milk and draught purposes.

Various seeds from the different localities are collected and tested against the improved varieties evolved by the research institutes: various manures are tried on different crops for their value as supplements to cattle dung with due regard to their economic aspect; improvements on implements are effected with special attention to their price which the cultivators can easily pay, finally improvements on cattle are effected by rearing the stocks of the reputed breeds of cattle in India in our farms, by supplying either good bulls or by crossing the indigenous breed as the case may be. The arrangement to grow good fodder crops, a necessary item of cattle improvement, is always kept in view. Successful results of these works are first conclusively tested on our farms and then they are demonstrated in the cultivators' fields under their conditions and when a demand is created it is met by arranging the supply either from our farms or from any authorized agent.

Makers of ploughs and other agricultural implements will probably note that on p. 8 we are told that the Sepaya Farm managed its cultivation during the period covered by the report, entirely with the help of the new Bihar implements which are gaining popularity day by day with the cultivators in general on account of the way they help to reduce the cost of cultivation. There are on the farm in addition a power thresher, a mower with reaping attachment as well as a disc harrow and seed harrows; all of them are found to be very essential to manage a large farm like Sepaya. But the average cultivator is concerned only with the plough to break the land, the cultivator and a ridge plough to earth up his crops like maize, sugarcane, &c., and possibly with a lever peg harrow to break the crust after a shower. All of these except the last one are supplied to him in a very efficient and cheap form by a complete set of Bihar implements costing about Rs. 30. The

efficiency of these implements is demonstrated on our farms by actual working and a good supply of them has always been kept there so that anybody who likes a supply after seeing the actual work may purchase what he wishes on the spot.

The Bihar 3-tined cultivator which can easily be converted into a 5-tined one has no rival so far as its efficiency is concerned in the soil of North Bihar compatible with the price at which it is offered. It is suitable for all kinds of bullocks, and no complaint has so far been received from any quarters that any bullocks have ever found it difficult to pull the implement—the first usual complaint from the Indian cultivator when any improved implement is introduced. No doubt we had this complaint for the Bihar plough with its original device, but the modification introduced has made it much simpler, lighter in weight and cheaper without reducing its efficacy and the plough in its present form is quite acceptable to the average *raiya*. The Bihar ridge plough has already become popular and is commanding a great sale. How these implements are getting popular day by day can be very easily judged by their sale, the number disposed of increasing to 788 in 1929-30, from 286 in 1928-29.

Of the Chota Nagpur range, Mr. C. A. Maclean, Acting Director of Agriculture, when speaking of the Kauke Central Farm, said (p. 244) that the cattle breeding policy of the farm was modified a little during the year under report. So far the policy was to breed a herd of pure-bred Sahiwals as soon as possible. But as that type of cattle is not likely to produce suitable bullocks for draft purposes in the rice lands it was decided to breed a herd of Tharparkars also in addition to the Sahiwal herd. So 16 Tharparkar cows, with 13 followers, and 16 heifers were purchased from Karachi during the year. The work on cattle breeding in the farm is now proceeding on three main lines:—

- (1) To establish a pure bred Sahiwal herd for supplying bulls and heifers to dairy men.
- (2) To establish a pure-bred Tharparkar herd for supplying bulls to cultivators in the districts.
- (3) In the meanwhile to maintain the milk supply by keeping a number of Ayrshire and Sahiwal crosses.

With care and the help of science their total milk yield increased from 215,678 lb. to 260,167 lb., but the average milk yield per head remained stationary at 12.9 lb. This was due to the addition of Tharparkars to the herd.

Mineral Contents of Natural Pastures.

THE seventh report of the Economic Advisory Council (price 3d. net, from Adastral House, Kingsway, London, W.C.2, and the usual Government agents) deals with the above subject as considered and reported on by the sub-Committee appointed to look into the matter. It may be remembered that in January, 1930, the Committee of Civil Research which appointed this sub-Committee, an unusually strong one, was absorbed in the Economic Advisory Council of which the sub-Committee became a Committee, hence the reason of this valuable report being issued by the E.A.C.

The Summary of Conclusions and Recommendations run as follows:—

CONCLUSIONS.

(i) On scientific grounds we attach great importance to the investigations both in Kenya and in Scotland, and we regard it as in a high degree desirable that arrangements should, if possible, be made for their continuance.

(ii) The Station at Naivasha constitutes in effect a Research Station of Animal Nutrition, the only one of its kind in any part of the Tropics. Through the generosity of Kenya in providing the farm and a grant of £5,000 with which to stock and equip it, it has been possible to establish this Station at a very small charge. If, through lack of funds, it was found necessary to close this Station, it would be a great misfortune to Colonial Administrations in Africa which are confronted with many pressing problems of nutrition in relation both to their native populations and to the cattle on which they depend for their livelihood.

(iii) During the past two years the work in Scotland has developed into an intensive study of the influence of diet on immunity from disease. If the test which we recommend confirms the experiment already carried out, the results of the first year's test at Garrochoran, which is typical of much of the grazings in the Western Highlands of Scotland, indicate that the feeding to sheep of substances found to be deficient in the natural pastures in winter has increased the fertility of the ewes by about 15 per cent. and has decreased the mortality-rate by over 25 per cent., and, in addition, has increased the market value of the animals sold.

(iv) We realise that, in the circumstances of the present time, the provision of grants for the continuation even of highly promising lines of scientific research must be a matter of anxious consideration to grant-making bodies such as the Empire Marketing Board and the Advisory Committee of the Colonial Development Fund. While on scientific grounds we are satisfied that the work should continue, we are of opinion that on grounds of economy the work both in Kenya and

in Scotland should, for the present, be confined within the narrowest possible limits, both stations being placed on a care and maintenance basis and run at a minimum cost.

RECOMMENDATIONS.

In the light of the foregoing conclusions, we recommend:—

(i) That, in view of its great scientific value, arrangements should, if possible, be made on the expiry of the present grants by the Empire Marketing Board, i.e., after the 31st March, 1932, for the work in Kenya and Scotland to be continued for a further period of three years on the most economical basis possible, namely:—

(a) a grant at the rate of £1,500 per annum for the continuation of the work at the Naivasha station in Kenya; and

(b) a grant at the rate of £1,500 per annum for the continuation of the work at the Garrochoran sheep station and at the Rowett Research Institute, Aberdeen.

(ii) That the Secretary of State for the Colonies should be invited to endeavour to secure the continuance of the Naivasha Station either:—

(a) by inviting the Empire Marketing Board to make a further grant at the reduced rate of £1,500 per annum for a period of three years; or

(b) by inviting the Advisory Committee of the Colonial Development Fund to make a grant of a like sum.

(iii) That, as regards the financing of the work in Scotland, the Department of Agriculture for Scotland should be invited to confer with the Empire Marketing Board.

(iv) That any future grant for the continuation of the work at Naivasha should be made direct to the Government of Kenya; and that there should be established in Kenya a separate fund into which such grants from the United Kingdom should be paid and also any receipts that may accrue from time to time from the sale of stock or otherwise on the farm, this fund to be used for the payment of the salaries of the two Rowett Research Institute workers engaged at Naivasha, for the purchase from time to time of additional stock and equipment and for meeting all other expenses incidental to the work at this Station.

(Signed) WALTER E. ELLIOT, *Chairman*.

[Major WALTER E. ELLIOT, M.C., M.P.,

Financial Secretary, Treasury.]

In the July issue, which starts the twenty-eighth year of the existence of TROPICAL LIFE, our Stockfarming Section will be devoted to a carefully considered review, which has been specially written for us, of Sir Frederick Keeble's new book, "Fertilizers and Food Production on Arable and Grass Lands" (pp. 196, price 5s. net), with a Foreword by Sir Harry McGowan, head of the I.C.I. group, who figured as "Our Friend" last August.

COTTON GROWING NEAR LAKE NYASA.—PART II.

By SUSETTE CRAMER.

THERE are long lines of workers hoeing the ground; the hoe is the only implement used in East African agriculture, the women generally working together chattering at the top of their voices; some of them have babies not more than three days old slung on their backs, leaving their arms quite free of course, the sun blazing down fiercely, but no one minds *that*. The babies sleep peacefully, their heads bobbing up and down as their mothers use the hoe. Everyone laughs, sings, and works; if there is any dawdling the voice of the *Capatao* (who is never very far off) calls him or her to order, generally with a threat of stopping the precious "*poshu*" "food" money—(sixpence a week).

Thus the day goes on, someone runs occasionally for a drink to the stream near, a baby wakes and squalls, is given nourishment and soon goes to sleep again, a little *chimanga* hidden somewhere among their clothes is very hurriedly eaten, but there is no stopping for a meal for any length of time, till the sun sinking lower in the heavens shows the glad time has come, when work for the day is finished; then how welcome is the sound of the *Lipenga*. As its loud banging sounds on their ears a roar of delight breaks forth from every throat, and every man and woman run with their hoes to pile them up together ready for the next day. The *Capatao* is very careful always to see this is done and woe betide anyone who neglects to bring in his or her hoe.

Meanwhile the older women have been seeing to the cooking, the younger ones being all busy in the fields. Many fires have been lighted, great earthenware pots are on, full of *chimanga* and *mapera*, Kaffir corn. Dried fish stuck on long pointed sticks are held in the flame for a few minutes and then devoured; seldom is there any meat, and water is the only drink except once a year when the *mapera* is quite ripe, and then quantities of *Moa* (beer), are made and drunk; at no other time does the East African native "exceed." The laughing, talking, feasting, and merriment go on every evening for hours and sometimes far into the night.

Cotton differs from tobacco in the sowing of seeds in that the latter must be sown in shaded beds first, carefully watered and then transplanted, but cotton seed, a large black seed, is put where it is to be grown, and left for the rains to water it. After the early rains, the little plants soon appear; if they are growing too thickly together, some are pulled out, and sometimes planted in another part where the seed has not germinated. In time comes the flower, a pretty pale yellow, and then the light green ball which contains the cotton. Until this is ready to be picked there is not much work beyond careful weeding, for with the rains come many weeds also.

When the bolls are ready they burst open, show-

ing the snow-white cotton inside which the young seed is embedded. Very pretty the cotton fields look then, as if large flakes of snow had fallen all over it. But now the work commences in reality. The services of every man, woman, and child at all big enough are required, and all are put to work picking all day long. Large baskets being scattered about the fields at regular intervals to receive the cotton. When full, the baskets are taken to the shed near, and emptied into much larger baskets, which are placed on high platforms to prevent the white-ant getting at the cotton and completely spoiling it.

When the whole crop is gathered in, it is then sorted carefully, the dark coloured cotton, or any brownish or yellowish in colour is put in one heap, the snow white cotton in another (and very like a snow drift it looks). Then comes the ginning; in this case the machine was worked by hand, cotton was put into it, a handle turned vigorously and from one mouth of the machine the seeds appeared and the cotton from another. Then came the pressing and baling. The cotton was pressed into hard firm bales of 60 lb. weight, this being the weight each native could carry, for though part of the journey to the coast was by boat on Lake Nyasa, after reaching Fort Johnston at the foot of the Lake, the rest of the journey was on foot, each native carrying his load on his head, with each hundred "boys" as the native of any age is called, in charge of a *Capatao*. All the cotton goes to Port Herald on the Zambesi and is there made into bales 300 lb. in weight, to be sent from there to Liverpool.

It may not be amiss if I conclude by describing a day spent on a cotton plantation; take the one at "Usa" which I have previously mentioned. I lived for some time on Lake Nyasa, eight miles away, but often came to spend a day on the plantation.

A journey in tropical Africa is always started very early, so I was out of bed while it was still dark, and seated by the window overlooking the Lake I waited for the dawn, which comes with almost startling suddenness in East Africa. The eastern sky from being a deep, dark purple became, as I looked at it, first pearl, then pale gold, soft rose colour shot with flame, whilst on the horizon, where the water and sky met, appeared spots of fire; then the sun rose and it was day! A quick breakfast and my "*machilla*" boys were waiting for me. A *machilla* is a covered hammock, slung on poles and carried on natives' shoulders. Other boys run beside to relieve each other when tired. The road, part of the way, was by the Lake and very beautiful it looked in the morning light, the other side of the road being tropic forest. Great "*mbawas*," the native mahogany tree, towered above us, and huge "*baobaba*" showed here and

there. Climbing and flowering plants growing everywhere, many birds were singing sweetly as East African birds can sing. My boys trotted along gaily, the journey they knew would be a short one, and soon the plantation at "Usa" came in sight, when I was brought to a pretty house with a wide veranda and a heavily thatched roof. Here my friend, Mrs Boardman, lived by herself (a white woman who, alone, was the owner and manager of the plantation); a hot bath was ready (*never* a cold one in East Africa) and then an early lunch, consisting of roast "kuku," for so the native hen is always called, venison, and a plentiful supply of different sorts of fish from the Lake, stewed guavas and cream with other fresh fruit in abundance, fresh lemonade made from the fruit of many lemon trees (with oranges) which grew near. An East African lunch is a good one. It was tastefully laid *au plein air* on a table under an enormous native fig tree, not very tall, but with wide spreading branches affording dense shade.

The plantation was all round us, the workers very busy, supervised by the *capitao*, but all seemed enjoying themselves, laughing, singing, talking, and as long as they did not stop work they were allowed to talk as much as they pleased. A number of small children enjoyed the shade of the great fig tree with my friend and myself. Small East

Africans are quite fascinating little creatures, round and plump, looking exactly as if they were made of chocolate, smooth and shining, as they were every day rubbed over with oils. None of them gave any trouble whilst playing, watching their mothers working for the plantation. They looked with distrust and a good deal of fear at the two white women near them, and would not on any account let us come too close; if we did so, they scattered with screams of terror, rushing to their mothers.

After a siesta we were ready for tea, also taken under the shade of the fig tree, then, armed with large green-lined umbrellas and of course with our sun helmets on, went to the sheds where there was a great pile of cotton. Skilled natives were sorting the coloured cotton from the snow-white sort. The ginning was proceeding as the cotton was brought in from the plantation, the baling press was getting ready too, each and all had their special work to do and did it well; then the welcome sound of the "*lipenga*" was heard, telling them work was over for the day and rest and food were to be enjoyed. As the sun declined, I returned as I came in my *machilla*. It does not do to travel in East Africa at night, though it is the most pleasant time to do so, there are too many wild beasts about. In a short time I was in Mtengula, very well pleased with my day on the plantation.



EMPIRE FRUIT—ITS PRODUCTION AND CONSUMPTION.

With Special Reference to the U.K.

If you turn to the *Journal* of the Royal Society of Arts for April 8 (No. 4142, vol. lxxx. Price 1s.), containing the full report (with diagrams for each of the leading fruits) of the paper (and subsequent discussion) read by Mr. W. G. Freeman, formerly Director, Department of Agriculture at Trinidad, B.W.I., before the Society, on February 23, you will find, on p. 503, a diagram showing the imports (apart from production in the U.K. itself) of fresh fruits into this country in a way that clearly shows what proportion is produced within the Empire and what is foreign grown. All this naturally raises the query as to whether the Empire cannot decrease the all-black column denoting foreign grown and lengthen the shaded portion by increasing the proportion of British grown fruit.

Look at the list and work out in your mind which fruits we can most easily work on. First come oranges with imports nearly £10,000,000 in value, of which just £2,000,000 are Empire grown; here surely we should be able to show a vast improvement. Furthermore, is it not correct to claim that oranges produced within the tropics, West Africa, West Indies, &c., are always sweeter and generally nicer than the

Mediterranean kinds? Jaffa oranges can be excellent, but they have a bad habit of sending the over-ripe and the centenarians along with the luscious fruit still in its 'teens. Let us therefore, for the sake of argument, say that the U.K. can easily take £8,000,000 worth more of Empire oranges, graded and selected, besides her present supplies. Apples come next, over £3,000,000 Empire out of £8,000,000 total, but they are rather out of our zone. Third on the list are bananas; here surely, with the help of West Africa, we should produce 100 per cent. British and not (merely to suit the convenience of non-British shipping lines) as, at present, barely half of the total imports. Steps should be taken at once to remedy at least this defect and benefit Empire trade and shipping all round. Grape fruit, limes (which surely are pleasanter than lemons) and pineapples all can be produced solely within the Empire. What steps are being taken to assist movements afoot to at least increase the proportion of these Empire imports as a start?

Talking of pineapples, current annual imports, Mr. Freeman pointed out, are worth about £1,000,000; of this the Empire supplies about

80 per cent. from British Malaya, largely *via* Singapore. This is a reminder that the *Malayan Agricultural Journal* has published some useful articles on the production of the pineapple and the preparation of its fruit, bran, &c., for market. Copies, costing perhaps 16d. post free or 14d. without postage, can be obtained from the Malayan Information Agency in London (57, Charing Cross, S.W.1.), or from the Department of Agriculture at Kuala Lumpur, F.M.S., at 50 (Malaya) cents a copy. The numbers we have specially noted are November, 1931 (vol. xix, No. 11), which describes the machinery needed and the process for turning out pineapple bran. But far more important than this was their issue of September, 1931, containing as it does a slightly abridged report of the Malayan Pineapple Conference held in Singapore on December 18, 19 and 20, 1930, and on March 9, 1931. In appointing this Conference, we are told in the editorial Foreword to that issue, the object was to inquire into matters affecting the Malayan pineapple industry and to suggest methods of improvement with special reference to the English market. It was hoped to make a thorough review of the present method of cultivating the crop and preparing it for market and so be able to place on record the point of view held by the three branches of the industry in Malaya, viz., growers, packers and exporters, as well as on the method of trading canned pineapples in the U.K.

More we cannot say, except to call attention to the useful warnings included in the report not to check enterprise but to point out the breakers and snags along the stream of success. The U.K. itself within the last few years has done great things in canned fruits. This industry really began to get into its stride only five years ago, and in 1929—or was it 1930?—there were only five firms engaged in it. To-day there are nearly forty well-established firms in the field, with an invested capital said to exceed £3,000,000. These firms do not deal with pineapples, but their products must, of course, push other fruits aside since no one eats two lots of fruit to keep Malaya as well as the home canners prosperous, ready as we all may be to help enterprise everywhere within the Empire.

West African readers will note in the report if they are wise enough to secure a copy that the Malayan pineapple canning industry took its rise somewhere about 1904. Up to the present it has been maintained practically exclusively as a means of handling pineapples grown as a catch crop between young rubber and has been carried on almost entirely by Chinese, so, in its present form, pineapples may be described as a by-product of the rubber industry. Up to about 1921, the industry was practically confined to Singapore. In 1929 the English pack of canned fruits exceeded fifteen million tins, whilst

Malaya exported 58,692 tons of tinned pineapples. In 1930, the Malayan exports were rather less, 57,959 tons, but the English production has more than doubled the total of 1929. The Hawaii product is reckoned to be a better quality article than the Malayan one; all the same, with an average annual export of about 180,000 tons (425,000,000 lb.) it also leaves Malaya far behind as regards quantity.

Pineapple wilt trouble, like Panama (wilt) disease with bananas, is said to have seriously affected the output in Hawaii. On no account therefore should bananas be interplanted with pineapples. So troublesome has wilt disease become in Hawaii that certain companies, the report tells us, are opening up plantations in the Philippines, whilst one of the most important firms recently acquired a large block of land in Kenya for the purpose of embarking on pineapple cultivation on a large scale in that Colony.

Maize Culture.

LECTURING in Kenya, at Nakuru and Kitale, Mr. Colin Maher, Agricultural Officer, chose Maize as his subject and must have given those present many useful hints, judging by the report in *The East African Standard* of March 12. The following notes have been made by ourselves:—

The great necessity of making or maintaining the soil fertile. Plough as deeply as the top soil allows to facilitate maximum root development. Planting (in Kenya) must be done as early as possible, while the soil is still warm and before the nitrates have been largely washed out of the soil by the new season's rains. The cost of cultivation will be lessened considerably if farmers make free use of tooth harrows both before and after germination. Thinning out must be done as early as possible, the water taken from the soil by plants which are thinned out late, too late sometimes, might have been very valuable to those left for the ultimate crop should the rains become scanty.

(Continued from p. 110).

well as Ames in Iowa, and all along he has been interested in land development and finance. He came to Tanganyika from Kenya at the commencement of last year and there he had been the Deputy Director of Agriculture (in an excellent school and during a busy period) for no less than ten years. Before that again Mr. Harrison was working for the Department of Agriculture in South Africa where he was Principal of Cedara, Natal, and subsequently Land Manager to the South African Townships Mining and Financial Corporation Ltd., known to many as the Bailey Group.



"Tropical Life" Friend.

No. 324.

MR. ERNEST HARRISON.

Director, Dept. of Agric., Tanganyika Territory.

WRITING at the beginning of March from Morogoro, where his Department of Agriculture is situated, "Our Friend" spoke of the plight of the sisal producers, particularly the smaller ones round about there. The greater number of these are doing no cutting and seem unlikely to do so unless arrangements can be made to run a central factory to decorticate, wash, dry and bale the fibre for everyone. One wonders, if prices improve, whether this could be arranged. Sugar engineers go far to finance the factories they supply machinery for in many cases; when will sisal be able to look for similar advantages?

Sisal is such a dominating factor in Tanganyika that anything that can be done to help the industry would be greatly welcomed provided it did not encourage further planting, at any rate until values improve. Not only does the crop provide the landowners themselves with money to purchase what they need but also provides work (and therefore the power to purchase goods) to a large number of natives, and so altogether can cause much money to circulate. Tanganyika, during the long-continued slump, has shown a high degree of elasticity and adjusted itself to a wonderful degree to the adverse circumstances with which it found itself faced. Undoubtedly, we have been told, the fabric of the industry has been strained and sacrifices have been demanded, but these have been forthcoming from all those associated with the production of the fibre. They

put up a good fight and this makes one all the more anxious to see them pull through. The whole industry most certainly deserves sympathetic treatment for the way it has shown its ability and will to overcome the difficulties which surround them just now. It is hoped that some system of group controls will develop in the near future and so help to lower costs and increase everybody's ability to carry on.

"Our coffee industry," writes Mr. Harrison, "is slowly emerging from a difficult financial position and the planters fully realize that their plantations need a tremendous amount of care and of experienced, intelligent handling. To-day the planters are backing up the Department of Agriculture in matters connected with pest control, and it is to be hoped that the price of coffee will remain at a level sufficiently high to encourage and also to cover the cost of a thorough overhaul, reconditioning and re-equipment of many of the estates, as they need it.

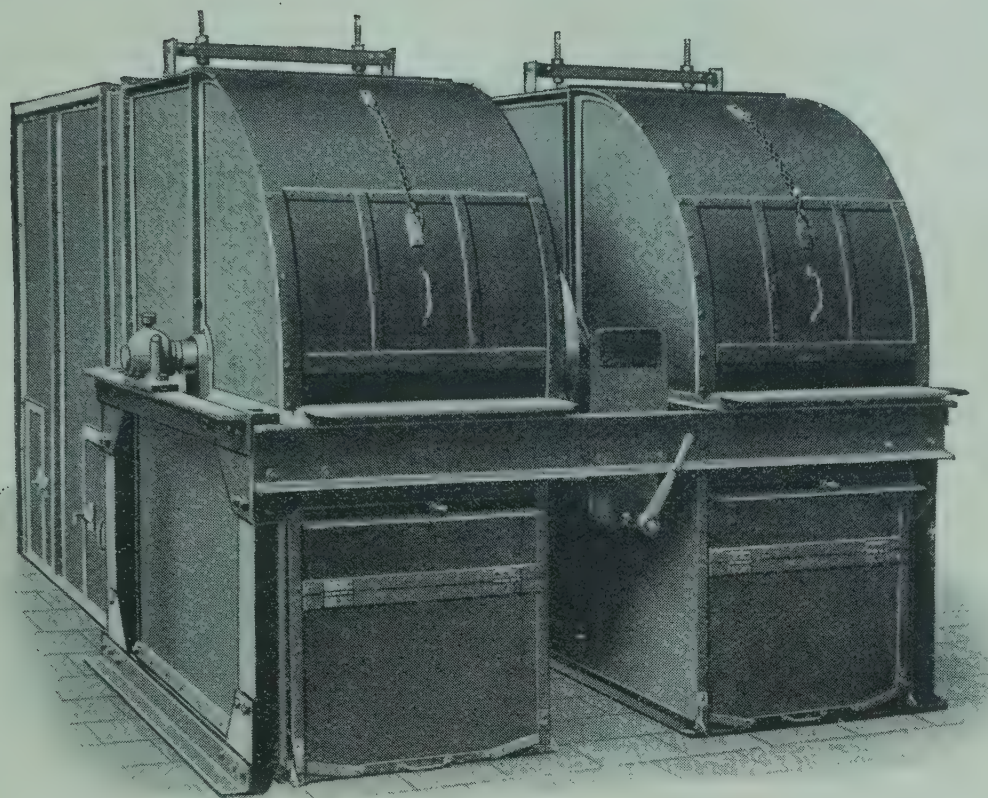
"Particularly important with some of these plantations is the need for up-to-date systems of contour terracing and layout of the areas. More attention should be given in many cases to cover crops and the 'handling' of the lands and trees to mitigate the damage done by overbearing, and to carry out, on widespread co-operative lines, the timely action, with suitable materials, of spraying and anti-pest warfare generally. Careful attention to the cultivation of our coffee, *always* with an intelligent spraying programme, is the most likely means to-day for the planters in the Northern Province to improve the quality and hence the reputation of their crop and thus improve their hold on the market. Present movements towards developments in connection with the curing of the coffee locally and towards checking current unsatisfactory forms of speculative buying, particularly of native coffees, are being encouraged and must all work out for the general good."

When one reads of these strenuous efforts being made to help Tanganyika with its sisal and coffee producing industries you cannot but wish them all the success they deserve, and they deserve a good deal. At Bukoba, for instance, they are about to make use of a system of inspection of the consignments of coffee prior to export, which can but help in many ways, especially just now when quality not only attracts good prices, but perhaps more important still when demand flags, good buyers as well, for they come to know and to rely on the marks or brands and so order them quickly and pass over others whose reputation has still to be established.

"Our Friend" is well suited to act as guide for such work for he has had plenty of local and other experience from the start, almost from birth one would like to say as, born in Cheshire he was educated at Preston and Edinburgh, as

(Continued on p. 109).

THE NEW "BIJOLI" SISAL-BRUSHING MACHINE WITH DUST-COLLECTION CHAMBER

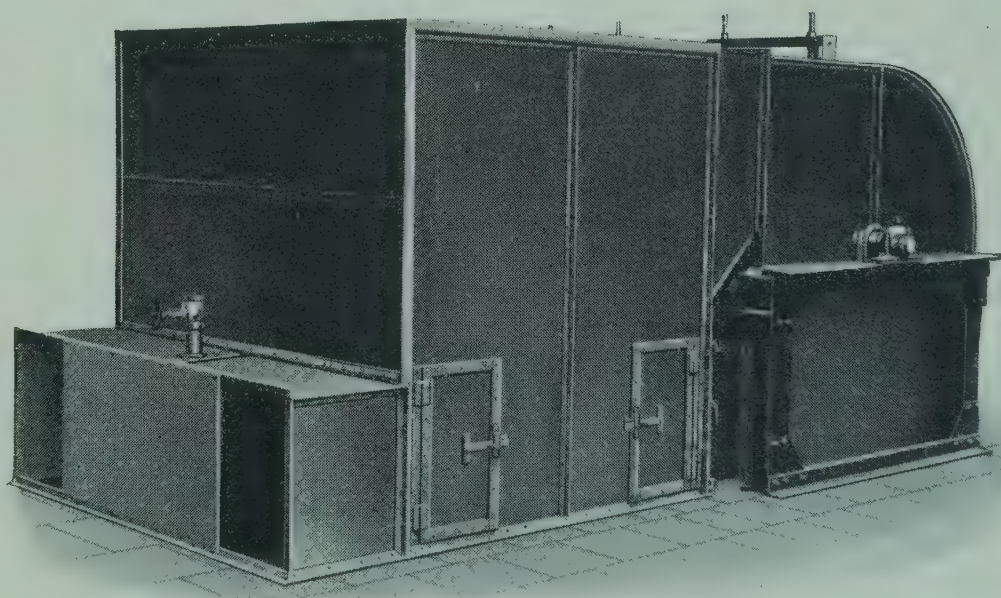


No. 124

Front view of
"Bijoli" Twin Hand-
Fed Brushing Machine
with dust collecting
chamber at the back.

No. 125

Side and back view of the "Bijoli" Sisal-Brushing machine showing large cleaning doors in dust collecting chamber and water regulating valve on spray box for precipitating the dust. There is a sump and drain underneath which cannot be seen in the picture.



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HERE AND THERE.

The Cost of the League of Nations.

The leading article in our May issue, "Is the League of Nations a Costly Fiasco?" and also our remarks on p. 85 on Liberia and the League, have brought us both press cuttings and letters all tending to show that even if the League is of some help it is far too costly. On May 9 we were told that the growing expenditure of the League of Nations is to be the subject of an inquiry by the League Council as the result of a request made at that morning's private meeting of the Council by Captain Anthony Eden, British Under-Secretary for Foreign Affairs. We are also assured that considerable criticism has of late been made concerning the nature of the work and activities of the under-secretaries, who are of different nationalities. If this section was abolished it is felt that £20,000 a year will be saved. Well and good, but what we want to see cut off the cost is more likely ten times that amount. We feel that it can only be a matter of time, unless we all grow rich suddenly, for a really substantial cut to be made, not by choice but through necessity.

The cost of the League of Nations during the past ten years, according to those in favour of maintaining it at the present cost, has been £9,000,000, divided, very unevenly, between 54 Nations. Yet when Captain Eden for this country moved a proposal to appoint "five men of affairs," i.e., five real business experts, to inquire into the expenses of the League of Nations, the *London News-Chronicle* wished to claim that such a proposal has brought nothing but deserved ridicule upon its authors and should never have been made. Strange to say, this very outburst of our London contemporary, far from creating an idea of Captain Eden's proposal being ridiculous, has caused us to feel more than ever that the cost of the League, especially to this country, badly needs looking into. This being so we were glad to see by our evening paper on the same day of the *News-Chronicle's* outburst, that staffs are to be reduced and expenses cut. They are so high that if the total cost of the League is divided between 54 Nations—only 16 are down as attending a coming meeting—the "other Governments have been looking at the matter of expenditure with a more careful eye than usual." Are they also ridiculous for so doing? Up to now we have not seen Liberia's name among those down to attend (on June 16).

"Buy British!!" "Oui, oui," says Spain. and acts on the advice, for we are told that, in order to improve the strains of swine in Catalonia the authorities have imported a large num-

ber of large white English pigs which they are selling to breeders at a quarter of their local value. Another report speaks of the ambition of large numbers of Spanish men and women who are anxious to learn English. All this if kept going is to the good for us. May such an ambition last and be fully satisfied.

Whilst sellers of rubber were anxiously striving to place as much of this useful material into American hands as possible whilst they had the chance, murmurings and growls seem to have been emanating from certain areas in the United States, reminiscent of the volcanoes down South, only in the Northern States the noises came, so reports say, from Humans. We are referring to Mr. E. F. McGrady, representing the American Federation of Labour, who, when giving evidence before the Senate Commission, is reported to have said: "There is serious danger of a revolt of the 8,000,000 unemployed in the U.S.A. unless the Federal Government takes steps to relieve unemployment." We always understood that the unemployed army in America numbered 11,000,000, and as to the Government being able to do anything even for 8,000,000, the fact that babies can be kidnapped and suffer the fate we know that at least one did, must leave Mr. McGrady or anyone without much hope of the U.S. Government being a help to anyone. Everyone therefore will be watching the progress of events across the Herring Pond with more than usual attention.

At a Special meeting of the Executive Council of the Joint East African Board held last week the Chairman stated that he had been anxious for some time to secure for the Board the services of another Member of Parliament, and therefore Sir Sydney Henn and he had approached Mr. Geoffrey K. Peto, C.B.E., M.P., who had agreed to join the Executive Council of the Board if so desired. The Chairman said that Mr. Peto, who is Parliamentary Private Secretary to Mr. Runciman, the President of the Board of Trade, has a stepson engaged in wheat farming in Kenya, and is keenly interested in East African affairs. Members of the Council expressed their appreciation of the action taken by the Chairman and Sir Sydney Henn, and it was unanimously resolved to invite Mr. Peto to become a Member of the Executive Council.

The Chairman reported that an invitation had been received from the Secretary of State for the Colonies for the Board to send representatives to discuss with him—in conjunction with other bodies interested in Colonial matters—the claims to be put forward on behalf of the Colonial Empire at the Ottawa Conference.

Notices.

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Tropical Life.

JUNE, 1932.

The Joint East African Board.

THE Report of the Executive Council of the above Board, outlining the work they have done during the year 1931 and giving a shrewd idea of what they hope to do in the near future has been published for some little time. Coming at a moment when we were exceptionally busy the attention we wished to call to the matter has had to be postponed, but that was only because we feel that the work that this body has done deserves much more than a passing notice.

To begin with, congratulations are due to the Council in now possessing offices of their own. These they have occupied for a complete year. Situated at Bevis Marks House, they are most central and easy of access. Those who like to delve and dive into the history of old London will tell you that every square foot around the 'Ditch (which almost abuts on Bevis Marks House) is packed with history marking the progress of its inhabitants since long before the days of the Romans. One likes therefore to take this as a happy omen of greater prosperity to the J.E.A.B., since it is now situate within the precincts of Houndsditch and so forms part of its population.

We are glad to see also that the Board have retained the services of Miss R. B. Harvey, M.A., as Secretary. The first-hand knowledge, both in East Africa as well as over here, that Miss Harvey must have gathered unto herself by now must be considerable and therefore of great help to the Council and Board generally. And these good things being as they are, surely it is surprising that the membership and subscription list is not larger. At times half the world that deserves notice and attention seem to be attached to or interested in East Africa, in one way or another, and, this being so, the membership should be larger. Surely East African settlers of all folks have learned by now that however short credit and cash may be it is always worth a pound or two to join in any scheme to safeguard one's interests on a co-operative (and hence cheaper) basis and generally to "keep the pot boiling," and pots cannot boil without fuel nor Advisory Boards without cash.

The table at the end of the Report shows the names, populations and areas of the five territories which the J.E.A.B. look after. Kenya, Nyasaland, Tanganyika, Uganda and Zanzibar.

Important areas all, and therefore worthy of a subscription twice the size of the one now demanded. In these days when even indifferent work costs so high, the highly trained nature of the duties that the Council of the Board have taken unto themselves, for love, most certainly deserves far more appreciation and liberal support when it comes to carrying out the duties clamoured for by members (and by how many more who do not send in their guineas to join?) and agreed to, after full consideration by the Council. Let us make a list of a few of these duties:—

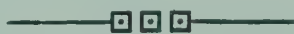
(1) Until we get our Imperial Parliament, to act as the equivalent of members of both Houses for East Africa on this side.

(2) To appoint experts to visit East Africa when investigations are necessary and to discuss with East African visitors whilst over here how the interests of the territories, and through that

of the Empire and London itself, can be safeguarded and advanced.

(3) To keep alive such questions as Closer Union, fair *v.* unfair taxation, the Congo Basin Treaty, roads, railways, our friend the Locust, air mails, cotton growing, and other matters political, fiscal and economic. It is a long list. What the Board does handle is well handled, services are given willingly, liberally and gratuitously, but money from those who benefit does not seem to be forthcoming in proportion, it does not come at all in many cases. Let us hope 1932 and 1933 will see this defect remedied.

By the way, those interested who are in or near London at the time, must remember that the seventh ordinary general meeting of the Board will take place on June 15, at 11 a.m. sharp, at Winchester House, Old Broad Street, whilst the annual dinner will be held in London at the Savoy Hotel, on June 22, at 8 p.m.



MARKET REPORTS, GOSSIP AND PRICES.

LOOKING far afield, let us take note of what is happening in India and Liberia. As the idea still exists that native races can govern themselves, with that absence of intolerance and cruelty that most White Races demand they should and can do, one cannot help drawing attention to the outbursts in India between the Hindus and the Moslems, Musselmen or Mohammedans, however you may like to call the latter. Take away the white man's rule and then, how easy to realize what will happen. Slacken that rule as we have done, and sum up the disorders and deaths that such slackening has caused already.

Now turn to Liberia; how much worse is the case of this country, a Member of the League of Nations, that costs so much to maintain, and yet cannot prevent the people of its own members, judging by published reports, from shooting or burning alive men, women and children. Some say as many as 160 victims have been disposed of in this way. Here we have Black and Coloured Man's rule unalloyed, yet with the League's shadow—helpless maybe, but still there—in the background. Whatever would Liberia be doing if the League did not exist, allowing that it has a small hold on its members?

Turning to less tragic but not less important matters, as believers in the remonetization of silver, we have been closely watching the speeches in the papers, especially the following:—

“Surely the fact that silver is denied all rank or recognition, surely the fact that the difference in price between silver and gold is greater than it has ever been, ought to excite the concern of world statesmen.” thus spoke the Rt. Hon. Winston Churchill, M.P., over the wireless to

America on May 8, and he then went on to say:—

“Silver is the money of a billion human beings, and ought not to be treated with as little regard as if it were a sack of potatoes. Silver has always been the comrade and ally of gold. Surely we should do well to consider more carefully the part it has to play in our world house-keeping.

“It is this hideous process of deflation which is the main cause of our troubles. Why do our countries not take counsel together and try to reach a common understanding about the money policy of the world? Why do they not try to arrest this remorseless and destructive deflation?

“Let us,” he urged, “study this money problem together and strengthen ourselves for that task by strictly balancing our Budgets and facing our responsibilities like men.”

No doubt there is another side to the question, one of the utmost importance to bankers and Big Finance (and abuse these Great Twin Brethren, as you like, heaven help you if you try to do without them), yet we must own that whilst many travellers in the East and elsewhere have adversely criticized the demonetization of silver not one has, so far, spoken in favour of doing so. To-day one hears more of the matter, but there are no hopeful signs that a change will be made. This being the case, it was all the more pleasant to hear Mr. Churchill's emphatic opinion on the subject. Such statements must do good.

Regarding the Exchange Restriction in Greece, the D.O.T. (35, Old Queen St., S.W.1), has sent us a summary of the new law over there, prescribing the form of exchange control to be operative in that country. If you are interested in this write the Department of Overseas Trade

at above address, -quoting Nos. C. 3881 and C. 3888.

By the way, we have just heard that the City offices of D.O.T. have been moved to 9-12, Basinghall Street (second floor), London, E.C.2, 'phone Met. 4713, which please note.

Moving on to our usual market gossip, we come to

Cotton.

Here let us first reproduce the following paragraph from our Manchester contemporary, *Cotton*, of May 14, which tells us that more space will be required for the next British Textiles Exhibition, which will form a section of the British Industries Fair in February, 1933.

An interesting feature is the demand for increased space from firms who exhibited experimentally on a small scale last February. Over 100,000 buyers visited the British Textiles Exhibition, a fact which confirms the conviction of the industry that a comprehensive annual Textiles Exhibition is welcomed by textile buyers. In 1933 and in succeeding years the exhibition of British textile products will be one which the world's buyers cannot afford to miss, and producers of raw cotton will also be wise to visit. At least the exhibits must stimulate one to hang on.

Turning to general cotton gossip, we agree with those who claim that lack of money, exchange restrictions, doubts as to the reliability of some of the published statistics all tend to restrict consumption of the finished article and hence the demand for raw cotton.

America still seems unable to pull up with regard to the use and therefore the purchase of fertilizers. This and the reported prevalence of weevil trouble tend to justify the opinion of holders that they are wise not to press sales. Uncertainty, however, exists as to what the American Government, i.e., the Federal Farm Board will do. The U.S. Government's statement that it intends to realize on 650,000 bales, i.e., half of its 1,300,000 bales, holdings, cannot please anyone; sellers because it will help to depress buyers and buyers because it will cause them once more to wonder when to buy. Another report speaks of the anxiety of the Federal Farm Board to turn 1,000,000 bales of cotton into cash, if the financing can be arranged. Can such arrangements be made? ask some. If this deal is pulled off, who are the buyers and what will the price be? ask others, whilst a third query wonders whether the Board have got sick of its twins, wheat and cotton, and wish to turn them into money as soon as possible. To turn anything into money in these days is not easy, so it is no wonder that both buyers and sellers are asking questions, though seldom obtaining helpful answers.

Moving on to prices, the following were the official "Spot" prices in Liverpool on May 13

and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	4.58*	4.53*	5.32*	8.65	6.86†
Strict Middling American	4.63*	4.58*	5.47*	8.85	6.96†
Fair Pernam	4.68	4.63	5.37	7.90	7.10
F.G.F. Sakel. Egyptian	6.20	6.10	8.25	14.15	10.00‡
Fine Broach	4.24	4.21	4.33	6.25	6.1 ⁷ / ₈
Fine No. 1 Oomra	4.15	4.12	3.91	5.60	6.1 ³ / ₈
Fine Bengal	3.75	3.67	3.59	4.95	5.1 ¹ / ₈

* *Universa Standards.* † *Liverpool, Fully Mid. Egyptian Brown.* ‡ *Good Mid.*

Rubber.

THE London *Public Ledger* (which this year has introduced many useful changes and quotes sugar, also American news, very fully) included in its issue of May 20 an important report, over a column in length, on the Du Pont Synthetic Rubber. Many people who are conversant with the history of the Du Pont family and firm declare that whatever they take up turns to gold, and they are prominent in many industries. We rather would say that whatever the firm takes up they spend much gold upon to bring it to perfection, and for this reason one is inclined to give more than ordinary attention to the stories told and the accounts published in the *India Rubber World* of New York and elsewhere, concerning the development of the synthetic preparation that has been named Duprene.

At a meeting of the Akron group of the Rubber Division of the American Chemical Society, the *Public Ledger* tells us, quoting from *Industrial and Engineering Chemistry* of Washington, D.C., U.S.A., chemists of the Du Pont company announced the results of extensive investigations that had led to the development of a new synthetic rubber made by the controlled polymerization of chloroprene—i.e., 2 chloro—1,3 butadiene. A plant is being constructed for the manufacture from chloroprene of the new synthetic rubber, to which the trade name of Duprene has been applied. On p. 59 of the *India Rubber World* (May issue, 420, Lexington Avenue, New York City) will also be found useful details of the newcomer.

On May 27 the *Public Ledger* also published the following extract from a "chat" they had with a friend who had been travelling in Russia for five months.

"We were told that the synthetic manufacture of rubber had now reached the commercial stage. One of the three big factories began to work at the end of 1931, and hopes to deliver 12,000 tons of synthetic rubber in the course of this year. Two other factories (which are to produce 20,000 tons) will be ready at the end of 1932.

"Our friend was told officially that the rubber manufactured was fully equal to the best kinds of natural rubber. The inventor, Mr. Wassilie Aebdieff, stated that absolute alcohol was the basic substance used, and that his method was

therefore of great interest, because it would contribute to the growing of the beet-root, and to the prosperity of agriculture in general. He could not ascertain, however, what the cost price was.

"We reproduce these remarks without any guarantee of their exactitude, or accepting them ourselves as fully representing the truth."

Our contemporary adds rather naively that, "We all know that—consciously, or unconsciously—Russians are apt to take their desires for facts."

Coming to the usual run of market gossip, there are sellers of fine hard Para on the spot at 3 $\frac{7}{8}$ d. per lb. This of course is not entirely helpful to competing sellers. One wonders how buyers' ideas of this particular rubber are tending, and, even if a sale did take place at that price what quantity was it that changed hands. At the moment it is claimed that America will place no duty on raw rubber entering the country and so the demand from that side is quiet. A fair index of the market this month can be found in the London Term quotations basis Standard smoked ribbed sheet, ex wharf, London. These run as follows:—

PER LB.	SPOT	JUNE	JULY/SEPT.	DECR.
May 2nd	2	2	2 $\frac{1}{16}$	2 $\frac{1}{8}$
" 7th	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$
" 11th	2	2	2 $\frac{1}{16}$	2 $\frac{1}{8}$
" 12th to 18th	1 $\frac{1}{16}$	1 $\frac{1}{16}$	2	2 $\frac{1}{16}$
" 26th	1 $\frac{1}{16}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$	1 $\frac{1}{16}$

For a fortnight or more the market has been held up by the belief that America would be levying a 5 ct. duty per lb. on imported rubber. The Finance Committee of the Senate approved of the proposal but others did not, so the tax has not come as yet, but for the time it gave firmness to the market whilst, according to Messrs. Lloyd, Matheson & Carritt, it was anticipated that rubber stocks in the United Kingdom will be reduced by several thousands of tons during the next ten days, dealers both in New York and London being anxious to cover their Contango contracts prior to the imposition of the tax (now dropped).

Subsequently demand slackened and prices eased, the present price for spot rubber being 1 $\frac{1}{16}$ d. per lb., or $\frac{1}{16}$ d. per lb. lower on the week. Up to the Whitsun holidays, prices were as under. On May 18 no report was issued:—

SPOT QUOTATIONS—	1932		1932		1932		1931	
	MAY 11TH		MAY 4TH		APR. 27TH		MAY 13TH	
	s. d.		s. d.		s. d.		s. d.	
Smoked sheet (F.A.Q.)	0 1 $\frac{1}{16}$	0 2	0 1 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 1 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
Crepe (F.A.Q.)	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
MAY 11TH								
MAY 4TH								
FORWARD POSITIONS—	SMOKED SHEET		CREPE		SMOKED SHEET		CREPE	
	s. d.		s. d.		s. d.		s. d.	
1932, May	0 1 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2	0 2	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
" June	0 1 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2	0 2	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
" July/September	0 2	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2	0 2	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
" October/December	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
1933, January/March	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$
" April/June	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$	0 2 $\frac{1}{16}$

STOCK—		1932 TONS	1931 TONS
London, Week ending May 7th		61,411	86,663
Liverpool	" "	61,674	52,865
Total		123,085	139,528

SINGAPORE QUOTATIONS—

May 11th.—Spot, 5 $\frac{3}{4}$ cents; July/September, 1932, 6 cents; October/December, 1932, 6 $\frac{1}{4}$ cents.

May 4th.—Spot, 5 $\frac{7}{8}$ cents; July/September, 1932, 6 $\frac{1}{8}$ cents; October/December, 1932, 6 $\frac{1}{2}$ cents.

Balata.

This is a quiet market, with the foreign product now subject to a duty, whilst British balata comes in free. Current values include 1s. 8d. spot or c.i.f., which means that there is very little spot demand just now. Dutch balata is quoted 1s. 6d. c.i.f., Venezuelan spot at 10d., against 9d. (nom.) c.i.f. Both Iquitos and Panama are also nominal, the first at 3d. to 4d., the latter at 11d. to 1s., all of course liable to duty.

Vegetable Oils (London and Liverpool).

The palm oil market according to reports from Liverpool is dull, with quotations for Lagos afloat and for shipment at £15 12s. 6d. and £15 10s. for softs on the spot, against £15 5s. for June-July shipment. Mediums are worth £15 17s. 6d. if afloat and for shipment, against £15 10s. for Red Sherbro.

With oil cakes, natural feeding stuff, we are told, should lower the price of linseed cake; on the other hand, supplies are not bountiful enough to cause sellers to want to lower prices, so London made "retails" at £7 10s. to £7 15s., and Indian kinds £7 to £7 5s., against £4 10s. to £4 12s. 6d. for cotton cake, English make, and £4 2s. 6d., ex-ship for Egyptian.

Fine quality expeller decorticated groundnut cake is considered to be cheap at £7 2s. 6d. to £7 5s. for spot goods, but for forward positions shippers want higher prices.

Moving on to other produce we will start as usual with:—

COPRA PER TON.

May	CEYLON F.M.S.		JAVA F.M.S.		STRAITS F.M.S.		PHILIPPINES F.M.S.		SOUTH SEAS F.M.S.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
21	16	0 0	15	2 6	15	0 0	14	0 0	14	7 6
18	16	0 0	15	2 6	15	0 0	14	7 6	14	7 6
14	16	0 0	15	2 6	15	0 0	14	7 6	14	7 6
11	15	15 0	14	17 6	14	15 0	14	2 6	14	2 6
7	15	15 0	14	17 6	14	15 6	14	2 6	14	2 6

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation f.m.s. £14 10s. on May 21st.

COCONUT OIL PER TON.

Ceylon mill oil on May 21st was still quoted at £27 10s. per ton for spot parcels against £23 (cylinders) for May/June shipment. English deodorized in barrels is worth 5s. more than last month, say £33 15s.

OTHER OILS PER TON.

	CASTOR		GROUNDNUT		COTTONSEED		LINSEED		SOYA BEAN		PALM	
					CRUDE	EGYPT	SPOT†	SPOT†	SPOT, NAKED	KERNEL	OIL‡	
	FIRSTS	CRUDE*	CRUDE*	CRUDE*	EGYPT	EGYPT	SPOT†	SPOT†	SPOT, NAKED	KERNEL	OIL‡	

May £ s. £ s. £ s. £ s. d. £ s. d. £ s. d. £ s. d.

21 37 10 34 0 19 0 14 10 0 21 0 0 21 10

18 37 10 34 0 19 0 14 10 0 21 0 0 22 0

14 37 10 34 0 19 0 14 10 0 20 15 0 22 0

11 37 10 33 10 19 0 14 10 0 20 10 0 21 10

7 38 10 33 10 19 10 14 10 0 20 10 0 21 10

Soya Bean Oil. Oriental to the Continent, Feb.-March is worth £17 10s.

in barrels. * Crude, naked. † Net, naked, ex-mill. ‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL)		COTTONSEED		SOYA BEAN		GROUNDNUT		MANCH	
	CALCUTTA	LA PLATA	BLACK	BOMBAY	NUTS	AFLOAT				

May £ s. d. £ s. d. £ s. d. £ s. d. £ s. d. £ s. d.

21 9 5 0 7 15 0 5 18 9 11 15 0 15 7 6 6 16 3

18 9 10 0 7 16 3 5 12 6 11 17 6 15 12 6 6 17 6

14 9 11 3 7 16 3 5 16 3 11 17 6 15 11 3 6 17 6

11 9 10 0 7 18 9 5 11 3 11 17 6 15 10 0 6 15 0

7 9 7 6 7 15 0 5 16 3 12 0 0 15 7 6 6 11 8

Desiccated Coconut

This market seems firm at the moment with spot sellers both of fine and medium at 25s., against 21s. 6d. for May-June shipment c.i.f.

Coffee.

Whilst many of us are fighting over the question of duties or no duties on tropical products entering America, including coffee, the *Tea and Coffee Journal* of New York treated us to an excellent illustrated article on "Coffee Production in Brazil" in their April issue. This follows immediately on another article embodying Dr. Harold Mann's views on "Tea in Russia" concerning which we hope to have something to say next month. Whatever happens this year in America respecting duties on tropical products or other articles consumed by everyone so as to spread the burden evenly over the population, there is surely more chance of America having to pull down her indirect taxation barriers in the shape of protective duties on manufactured goods than there is of Uncle Sam much longer being able to avoid taxation on raw materials, including coffee and tea. If sugar is taxed so heavily to protect the home industry, the other commodities should bear their share of the burden of National Expenditure in order to balance the Budget. To-day, the writer in our New York contemporary tells us, Brazil is said to produce 75 per cent of the world's coffee and claims that she has 2,290,763,000 out of a world's total of 3,366,896,000 trees. Of this quantity, the Sao Paulo area has just over half, say, 51.5 per cent.; Minas 25.7 per cent.; Rio 6.5 and the rest of Brazil 16.3 per cent. Coming to consumption from another source, *A Gazeta* of Sao Paulo, in its table showing the per capita coffee consumption of the world, claims that whilst the U.S.A. remains satisfactory with an increase, Denmark and Sweden have shot ahead, whilst Germany takes less and Holland has gone back badly. Why so? Here are the figures in kilos (not lb., please note):—

	1895/1900	1913	1929/30
	KILOS	KILOS	KILOS
U.S.A.	4.40	4.40	5.45
Belgium	4.60	4.95	5.35
Germany	2.75	2.50	2.40
Denmark	3.70	5.60	7.30
Sweden	4.80	5.50	7.15
Holland	7.50	7.0	4.70

This table should be studied most carefully. When a campaign is set afoot to tell the world "Drink more Coffee," it shows which centres out of a list of over forty consuming countries needs most attention.

Coming to sales and spot prices in London, no auctions took place during Whitsun Week, i.e., after Whit-Monday, and very little was offered immediately before the holiday, but, basing values on those scanty offerings and other sales, we will quote as follows:—

Jamaica, good bold Mountain Grown blue, 187s. to 200s.; medium, 160s.; peaberry, 154s. to 174s.

Kenya, bold common brownish to fair greyish and greenish, 63s. 6d. to 108s.; bold common, 72s. to 74s. and 73s. to 92s.; brownish 54s. 6d. to 75s.; fair greyish and greenish 98s. to 100s.; fair, 102s. to 110s. 6d.; smalls, 50s. to 68s. 6d.; seconds, 55s. to 76s. 6d.; peaberry, 70s. 6d. to 99s. 6d.

Tanganyika, medium brownish 60s.; common seconds, 59s. to 62s. 6d.

Uganda, bold common greyish and greenish, 65s.; seconds, 55s.; bold Robusta, 48s. to 49s.

Nyasaland, medium common, 59s.

Of East India kinds:—

Mysore realized 98s. for bold common, and 119s. to 150s. for bold fair to greyish and greenish; seconds, 78s. and 90s. 6d. to 100s.; smalls, 74s.; peaberry, 115s. to 149s.

Coorg, bold ordinary, 91s.; seconds, 79s. to 83s.; smalls, 72s. to 75s.; peaberry, 98s. to 112s. 6d.

Neilgherry, bold ordinary to good, 95s. to 123s.; peaberry, 112s.

Shevaroy, fair bold, 100s. to 102s. 6d.

Colombian, bold greenish, 87s.

Costa Rica, smalls, 58s. to 67s.; small, common to fine, 58s. 6d. to 126s. 6d.; bold common greenish, 90s. 6d. to 110s. and 79s. to 105s.; fair 112s. to 124s. and 109s. to 117s.; seconds, 65s. to 118s.; good, 125s. to 137s.; fine, 141s. 6d. to 146s.; peaberry, 105s. to 151s.

Other Products.

Coming to the mixed grill portion of our fare, we will start as always with tea. What effect will the reimposition of the duty—2d. per lb. on British-grown, 4d. on non-British—have on the international trade of the article? A leading buyer for Australia and New Zealand outlined the matter for us as follows. Whilst fine and choice growths, say around 2s. per lb. more or less, will not be affected so much, cheap Dutch growths will net 5d. per lb. against 7d. for

Ceylons in bond. This will induce the Netherland growers, therefore, to look elsewhere, especially to Australia where the consumption per head is large, the duty small, and Australia has no preference on tea. Ceylon in that case will turn more to the U.K. and the larger supplies will tend to lower prices until the Dutchman can do as well—net—by shipping to London for far quicker cash returns than he can expect by sending his tea to Australia. This will take time, but in the end things will be much as they are to-day with another 2d. all round on prices unless Australia, like new Zealand, gives Empire teas preferential treatment, say 2d. per lb., as they should do. One says this somewhat forcibly because there was a strong plea recently put forward in London for the widest extension of Empire preference as a necessary safeguard in the Colonial markets, where unfortunately at the moment our fiscal freedom is circumscribed by Treaty engagements.

At present a disquieting feature of our overseas trade, we are often being told, is the continuous deterioration of our position in one of our best export markets, viz., the Dominions and Colonies. British exports to a large group of our Colonies in Africa and Asia are being displaced to our detriment by foreign goods, the sales of which have been increasing by leaps and bounds. Japan with her cheap cotton goods has made vast inroads into the markets of Malaya and Ceylon, and has also achieved great advances in Kenya and Uganda at the expense of Lancashire, whilst Java teas are likely to displace Ceylons within Empire markets.

This being the case, repeating that too oft-repeated word "Ottawa," it is to be hoped that something will be done over there to safeguard British teas in Empire markets.

Moving on to fibres, the position of Jute, both in the producing as well as in the marketing stages, has been receiving much sympathy in the Press. At the moment, traders in the article seem more concerned in finding or hastening a satisfactory conclusion to the trouble amongst the mills in Calcutta with regard to working arrangements. A settlement still seems far off, and yet until one is reached the market, troublesome enough as it is, cannot improve. A momentary pressure to sell recently sent prices back and, allowing for that, we quote this month £15 17s. 6d. to £16, against £16 2s. 6d. last month. With Manila hemp the market during the past month has been very quiet and prices are lower. Philippine shippers have more than once offered to meet the market, but even then buyers seem to be shy at placing offers. Grade J2 is quoted at £17 10s., K at £15 10s., M1 £13 15s., all c.i.f., against £18 5s., £17, and £15 10s. respectively the month before. With East African sisal the demand from the U.K. has fallen away quite materially compared with the

initial rush following the introduction of the Import Tariffs Bill, Messrs. Wigglesworth & Co. Ltd. tell us. This may be attributed to the reduction in duty from 50 per cent. to 15 per cent. on imported Yarns and Twines to this country which permits the resumption of foreign competition on the British markets. Orders or inquiries from the U.S.A. for Sisal are conspicuous by their absence, but more optimistic reports have been received from the Middle West, the crops having improved materially over the past few weeks, as a consequence there has been a very good demand for Twine.

Further evidence is available showing the new uses to which African sisal is being put, all to the good of the industry rendering it more independent of the fluctuating seasonal trade in Binder Twine. Values for African close firm on the following levels:—

	£	s	£	s
No. 1 Good marks	14	10	to 14	15 per ton
No. 2 Good marks	13	15	„ 14	0 „
No. 1 F.A.Q.	14	0	„ 14	5 „

C.i.f. European ports, according to standard and shipment position.

There are no quotations for the Mexican fibre, but the same authority in their report speak of 25,000 bales of Mexican sisal having been sold to America for the weaving of sacking as cotton bale coverings, this being a new and important development. Large sales both of Mexican and Java sisal are reported but no prices are mentioned. As East Africa also grows cotton, in some cases between the sisal, no doubt they will note the above.

Shellac on the spot is lower at 56s. for TN, 65s. to 130s. for Fine Orange, 60s. for AC Garnet, and 70s. for RLI button, against 60s., 70s. to 150s., 67s. 6d., and 80s. respectively before. Palm Oil kernels at £10 7s. 6d. per ton to Hamburg are slightly lower.

With regard to metals; with Tin many schemes *re* restriction, etc., are being discussed, including "export holidays," etc., whether they will lead anywhere has still to be found out. To-day's standard cash price is £125 12s. 6d. or a shade more, against £112 5s. in mid-April, whilst Copper is quoted £28 10s., showing a 40s. drop in the month.

Coming to finance, our Bank Rate now is 2½ per cent., and so one hopes everyone will be happy. Milan has also lowered her rate now, 5 per cent. against 6 per cent. before. This still leaves Berlin at 5 per cent., Paris at 2½, New York 3, and the Swiss Banks at 2 per cent. Bar silver is quoted at 16¾d. to 17d. as before, and gold at 112s. 11d., which is 3s. higher. This makes our table work out thus:—

MAY 21st	1932	1931	1930
Bank rate	2½ per cent.	2½ per cent.	3½ per cent.
Consols 2½ p.c.	64¾	60½	55½
Bar silver per oz.	16¾d.	12¾d.	19½d.
Exch. on New York	\$3.67½	\$4.86½	\$4.86

THE COCOA ASSOCIATION OF LONDON, LTD. The Second Annual Dinner even Better than the First.

BY THE CONTROLLING EDITOR.



The Second Annual Dinner of the Cocoa Association of London (170 present).

[Photo by Swaine.]

Views and News on the Cocoa Propaganda Scheme.

"MAY I strike an international note and welcome here M. Martougin, the well-known Belgian manufacturer," Mr. Wallace asked those present, when proposing the toast of "The Guests." "He was responsible for the very important National Conference of chocolate and cocoa manufacturers held in Antwerp in 1930, which did very useful work. I do not think I am giving away a secret in thinking that his presence in London is connected with the Cocoa Publicity Campaign, in which I hope it will be possible for us to join together with other countries in propaganda to bring the merits of cocoa products to the notice of everyone who does not already drink cocoa."

"You ought to advertise cocoa more," urged Sir Edward Crowe, Comptroller-General of the Department of Overseas Trade. "When you walk along the street you pass posters advertising everything in the world but cocoa. If you can increase the consumption of cocoa then the Gold Coast, Nigeria and the West Indies will become more prosperous and be able to buy larger quantities of British goods. Therefore, so far as I am concerned, the really important thing is to increase the consumption of cocoa not only in this country but throughout the world at large."

"The food value of cocoa and chocolate," claimed the Chairman, Mr. H. F. Methven, "is not yet sufficiently recognized, and I venture to say that, on this point alone, there is still much to be done in Europe to bring about an increased consumption of raw cocoa."

"The Empire Marketing Board have always been willing to collaborate with us in any problems that have arisen. I would particularly welcome this evening Sir Edward Davson, of the Empire Marketing Board and a Governor of the Imperial College of Tropical Agriculture."

Admiral Philip Dumas, when answering for the Guests, also said, "I have noticed the absence of advertising. I motored through South London and saw only one advertisement urging you to buy cocoa."

M. Martougin also spoke and referred briefly to the proposed international campaign for the impersonal advertising of cocoa. At the same time he expressed the earnest hope that H.M. Government would be represented at the Conference to deal with the matter which is to take place in Brussels in September.

* * *

After listening to the speeches following the dinner, from which the above excerpts are taken, can any of us be blamed if we left the table feeling that our wanderings in the wilderness of neglect and indifference have

some chance of coming to an end. True, we still have the equivalent of a Khyber Pass to go through, with the unwieldy and unyielding block across it represented by the inability of the Gold Coast and Nigeria—the Gold Coast in particular—to come into line with the manufacturers and those producing centres who agree that the value and attractive advantages of cocoa products as food and drink, especially the latter, are but ten per cent. known and appreciated to the extent that they should be. This being so, money must not be stinted to help us, and through us the producers in Nigeria and the Gold Coast, to mount the remaining ninety steps in the ladder of saturation point, when alone we can say, “Pass, all goes well.”

Even before we approach to anywhere near such a stage, we must turn to the individuals, the small retail confectioner, as far as chocolates are concerned, but most of all the grocers, who alone seem responsible for the distribution of cocoa as a beverage. This section of the industry is a great stumbling-block, as they seem quite indifferent whether they sell tea, coffee or cocoa powder. What can be done to change all that? Perhaps in September their indifference to cocoa will be fully discussed and remedies suggested. Now let us talk of the dinner itself.

Following last year's precedent we are again devoting the main portion of this month's cocoa report to the above gathering of the clans, and a great gathering it was, although one absentee we looked for in vain was Mr. Alistair Frame, who was unable to attend on account of a cold. Mr. H. F. Methven was in the Chair, with Rt. Hon. L. S. Amery, M.P., on his right and Mr. Paul Cadbury on his left. A newcomer was Lord Glenconner, whose family and firm have helped the sugar and cocoa producing industries in Trinidad for long years past. Sir Edward Davson, who has promised to safeguard tropical interests at Ottawa, so far as it is possible to do so, was also able to be present, so was Mons. Alfred Martougin, who played so important a part and proved so doughty a champion for cocoa when the Antwerp Exhibition was on, and who we are looking forward to greeting again in September, when the International Conference (see p. 80 in the April issue) meets at Brussels. Close to the writer sat Mr. John Cadbury (son of Mr. William Cadbury, with whom he visited West Africa a little time back). The House of Fry did not seem to have been represented. Why? Mr. Seebom Rowntree, C.H., and Mr. J. B. Morrell represented the York firm, but, unlike last year, the other leading firm, Terry's of York, were not represented, at least, not by name. This is too bad. If Messrs. Cadbury sent at least five representatives, including Mr. A. W. Knapp, their chemist, who was not there last year, and Messrs. E. J. Organ and W. Picard, who were, one hopes that

these other firms—next year—will also turn out in force. It was pleasant to see that Mr. Aucher Warner, a director of the Association, was present, as he has not been enjoying quite perfect health, and in his quiet, unobtrusive way he has been in the forefront of the ceaseless war that has been carried on since 1923 to make cocoa more popular. Other newcomers were Mr. J. L. Wilson Goode (H.M. Trade Commissioner for the West Indies), Sir Louis Souchon and Prof. J. M. Monro, whose important work at Slough in connection with the infestations of the cocoa moth was referred to more than once by the speakers.

The dinner was held at Grosvenor House, and gave everyone satisfaction. One particularly noted the dessert. All the fruit was in perfect order, tastefully put before you and in full supply. At times elsewhere this has not been the case, in fact one has wondered in the past how often the fruit can come to table before it is thrown away. With the efforts being made in most of the British cocoa-growing centres to develop fruit production as well, diners should note when fruit, if not chocolates, are to appear on the tables, what fruit is offered and whether it is British grown¹ and as perfect as it should be. The speeches were up to last year's level. Admiral Dumas, with his Sauce Tartare was there keener than ever. Unfortunately we have not room to give his best joke. Those who regret this must make a point of attending the dinner next year, as his speech is so much “saucier” in the speaking.

Starting with the Chairman, Mr. Methven referred to the friendliness of the Colonial Office to the Trade and claimed that the presence of the Permanent Under-Secretary of State for the Colonies (Sir Samuel Wilson) in their midst was but one of several proofs of their interest in the cocoa industry. The West Indies were also well represented by its leading men. West Africa had Sir Edgar Sanders, Lieut.-Col. Levey, Mr. H. J. M. McFall among others, whilst Mincing Lane was there in full force, a well-balanced and thoroughly representative gathering.

“The large manufacturers,” the chairman told us, “have very speedily adapted themselves to meet the economic circumstances of to-day. Prices have been adjusted without delay to fit the present spending power of the people, besides which quality has been constantly improved year by year.”

“When you consider that labour and other costs are substantially higher than before the War you will agree that it is no mean achievement to market, in the main, chocolate—especially in cake form—to the general public at less than pre-war prices. In other words, the benefit of the low cost of raw cocoa has been more than fully passed on

¹ On this point, please refer to our article on “Empire Fruit,” p. 108.

to the consumer. Cocoa and chocolate are no longer luxuries; they are necessities, and I think that this is being more commonly recognized.

"In Germany, for instance, a country that is suffering economic stress to the fullest extent. The consumption of cocoa in that country in 1931 increased by 20 per cent. It is evident that the German people look upon cocoa and chocolate as a very first-class article of food, which it undoubtedly is. The food value of cocoa and chocolate is not yet sufficiently recognized, and I venture to say that on this point alone there is still much to be done in Europe to bring about an increased consumption of raw cocoa. It is interesting to note that in this country there are close on 70,000 people directly employed in chocolate and confectionery factories. Also, we must not lose sight of the fact that our industry gives much work to other trades—shipping, for instance, box-making, and so forth.

"Last year, when we were talking of cocoa propaganda, Admiral Dumas expressed doubt if the members sitting round this table had ever indulged in cups of cocoa themselves. Apparently, his remarks were taken very much to heart by at least one member who attended the Dinner last year, for before the Banquet was ended he was bold enough to order a cup of cocoa. As we have the well-known artist, Mr. H. M. Bateman, with us this evening, I have no doubt this incident would provide a suitable title for a drawing:

'The Member of the Cocoa Association who drank a cup of Cocoa at the Annual Banquet.'

"I leave you to guess how he would deal with the subject.

"May we hope that we are amongst the first to congratulate Sir Edward Davson on being chosen as one of the seven advisors to the Delegation to Ottawa for the Imperial Conference, Sir Edward, I understand, will particularly give his attention to Colonial trade.

"It is interesting to note from the *Daily Mail* of April 5 that His Royal Highness the Duke of York not only takes a hand in domestic affairs but occasionally prepares a cup of cocoa for himself and the Duchess, just as he prepared it for his comrades in a gun turret during the Battle of Jutland.

"So cocoa is a beverage which, you might say, is in common use in almost every household in the land."

"Mr. Chairman," said Mr. Amery in the course of his speech, "you spoke of the early days when cocoa was a rare luxury, and it is interesting to think how the things that were once rare luxuries have gradually become necessities in the humblest homes. I saw a bill the other day of Queen Anne's time for tea at 60s. per lb., and it does suggest a certain reflection not without its bearing on our social philosophy, and that is the fact

that there are those who are wealthy enough to go out of the way to purchase something rare and costly and start a process which in the end may be of immense benefit to the whole of the community, and we are open to ask ourselves whether in a community where there are no differences, no wealth, no luxury, no extravagance, you would get the progress that you get in the world of to-day. There is hardly a single necessity of the humblest home that was not in its day a luxury and would not have been vetoed by any equalitarian. Tea, cocoa, sugar, coffee, glass, furniture—hardly a thing we can think of that did not start at one time as a luxury and has gradually been developed as a real necessity.

"You referred also to the valuable help given by the Imperial College of Tropical Agriculture and the Empire Marketing Board, and I should like to endorse what you said about the importance of the work done at Slough by Professor Monro and those working with him in dealing with the problem of the infestation of cocoa. These may be small things, but in the aggregate there is a sheer waste of *tens* of millions of pounds every year, whether in warehouse or transport of produce; a waste which a very small expenditure in scientific research can effectually stop, and I hope that your industry will not be niggardly in supporting this research and in supporting the work at Slough which can fit in very well with your own research work.

"We are up against very difficult times. I think your Chairman said very truly that your industry has borne the brunt of these times very well, and is at any rate in a much better position than many. It has the advantage in this market of a small preference, but that in itself is not a very great matter as compared with the problems of an industry that has to export to all the world, and I believe that it may be helped yet further if, now that we have adopted a policy of national protection in this country, it were also extended in some measure to the actual manufactured stage of the product of cocoa. I hope that the outcome of the Ottawa Conference may help forward the development of the industry in all its branches in the Empire. There again the problem may be apparently one of fiscal arrangement, but it is also a problem of the effective co-operation of the industry with industries and Governments overseas.

"It should not be beyond the wit of man to design a plan to give greater stability to our markets, and it is in the power of this country and those around us in the Sterling area, to devise, at Ottawa or after Ottawa, some reasonably stable measure of value for our own group of countries and such other countries as want to associate themselves with us, and if we do that it will, at any rate, be a practical first step towards framing such a stable system for the world at large. My own idea has always been

that in this matter, as in every other, a policy of Empire development and co-operation should not be regarded as a policy of reaction away from the conception of wordly expression, but rather as the essential practical first step to create a broader platform from which we can work.

"Cocoa, Mr. Paul Cadbury told us, is largely drunk by working class people and there is a demand for that deferred gift which is used in the sale of cocoa. The leading cocoa manufacturers met together after the war and decided that in the interest of an increasing market it was necessary to introduce the gift coupon in cocoa.

"Do remember," urged Sir Edward Crowe, "that you cannot possibly develop a trade in these days unless you advertise. Advertise—Advertise—Advertise! That is the advice that I give you. Advertise directly and indirectly. Arrange if you can that when film pictures are taken people should not only consume cocktails, &c. Have somebody occasionally drinking a cup of cocoa. You ought to know, but it is quite possible you don't because last year the Admiral found that most of you don't drink cocoa, that one of the principal places where cocoa is drunk to-day is not, as you may suppose, in the homes of poor people, but in the studies of school-boys. Do you realize that most school-boys to-day drink cocoa in their studies? I have gone into this matter and

they say, 'The tea we get is muck, the coffee is muck, but cocoa is a good drink.' And if you have got the good will of the boys who are going to become the men of the future that is a great asset, but you must keep it. Try to persuade men to drink cocoa. When they come back from a round of golf, wet, and they discover that the hour is such that they cannot get a whisky and soda, make sure that what they ask for is cocoa."

And there we must cease discussing this feast of good things, particularly the opinions expressed as to the absolute need of advertising cocoa products, especially as a beverage, more extensively, and this can only be done by educating the classes as well as the masses to appreciate the attractiveness as well as the usefulness of cocoa in whatever form it may take. In these days, when wise people lead energetic lives mentally and physically, no one need feel that cocoa will make them "crummy," whilst as for the other folks who still adore night clubs, a day may come when they also will turn to cocoa, even as a beverage, to rejuvenate their wasted and mis-spent energies. By the way, do H.M. Hotels include cocoa as a beverage in their menu, for short sentences or for long ones? If not, why not?

The Board of Trade Returns and latest prices of cocoa will be found on the first page.

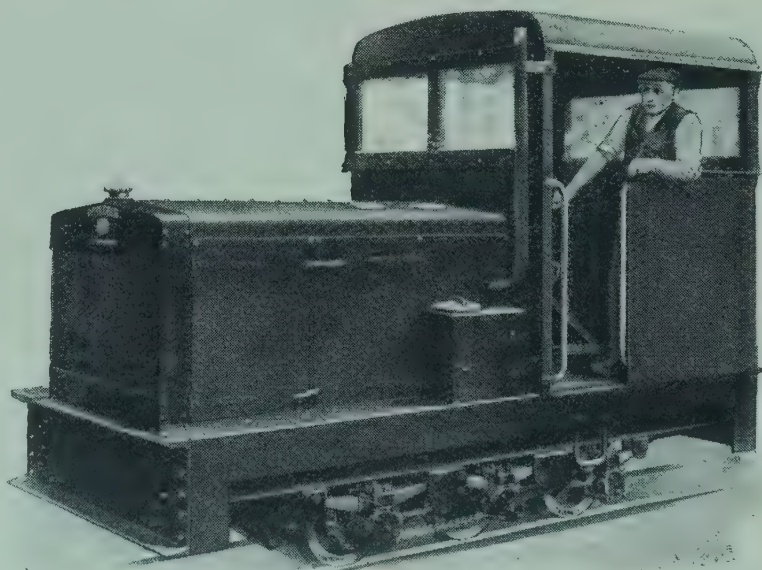
PETROL LOCOMOTIVES

SIMPLEX

DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ „
20/35	4 „
40/50	6 „
40/50	8 „
40/50	10 „



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ „
20	2½ „
20	4 „
27	5 „
50/70	10 „

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JULY, 1932.

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IN TOUCH WITH EVENTS

The following paragraph appears on p. 273 of the *Journal* of the Department of Agriculture of Puerto Rico (vol. xv, No. 3 of July, 1931), from which pp. 223-286 have been reprinted as a brochure entitled "Studies on Cacao," by Dr. Rafaele Ciferri, Santiago, Dominican Republic, together with plates, photographs, &c., of various yeasts, spores, ferments and other organisms with which the author has concerned himself in a highly scientific manner, alas, far beyond our comprehension. Here and there, as with the paragraph below, a little editing seems to be needed, but the study itself must surely carry the whole matter of the ferments, &c., that affect cacao, many steps further on towards finality of knowledge on this obtuse and baffling subject.

* * *

"The species is clearly distinct from the preceding, as well as from the *Eutorulopsis* variety isolated from the Dominican cacao. The problem of the comparison of the species in study among the to-date, more or less completely described species of the genus *Torulopsis*, remains the same. Thus we should create a new species 'ad interim' dedicated to Mr. Hamel Smith, pioneer of the study on cacao fermentation, which we will name, *Torulopsis Hamel-Smithii*, Cif., n. sp."

* * *

In the cocoa report we have published a review of the treatise now mentioned concerning which no price is given, nor are we told whether copies can be purchased either as a separate publication or in the *Journal* of the P. R. Agricultural Society. For the moment we will only say that the author is (or was) in Italy, at Via Coppa, 2, Alba, Cuneo, N. Italy, and has sent us a few copies to pass on to others.

* * *

Our old friends, Messrs. Rose, Downs and Thompson, Ltd., of Hull, seem to have gone in strongly and successfully for the last word in oil expellers, as a copy of their leaflet, ex their Catalogue No. 13, will show those interested in vegetable oil extraction who are wise enough to communicate with the firm. Our leaflet is in Spanish. Driven by an electric motor the output is continuous.

The Board of Directors of Barclays (D.C.O.) Bank have declared, out of the profits for the half-year ended March 31st, 1932, interim dividends at the rate of eight per cent. per annum on the cumulative preference shares and at the rate of four and a half per cent. per annum on the "A" and "B" shares, subject in each case to the deduction of income tax, which after making allowance for relief in respect of Dominion income tax will be four shillings and fivepence in the pound.

* * *

One reader was asking for news from planting circles in Rangoon, but unfortunately, on the spur of the moment, we could not send him any. We did remind him, however, that some little time back, under the chairmanship of Mr. C. F. Clifton, a meeting of planters in Rangoon agreed to form a Burma Planters' Association, and ask for it to be affiliated to the Burma Chamber of Commerce. A sub-committee was appointed to investigate the land revenue system. What has happened since then we have yet to learn.

* * *

Another subscriber in Belgium writes: "Could you favour me with a list of books of South America and her industries? Such a list, together with your paper, will be very helpful." After preliminary enquiries as to the trade channel the books should follow, we have sent the desired information.

* * *

Having to go to Southend, in Essex, we made a detour to Hockley, close by, to see the birds and "lay-out" of the Elmdene Poultry Farm, of which good accounts have reached us from time to time. The proprietor said he hoped soon to be making further improvements and extensions; meanwhile he was busy executing orders for birds and settings. Their nearest station is Rayleigh, L.N.E.R., and anyone wishing to make use of the strains obtainable there would do well to pay the place a visit, first writing to the proprietor, R. J. D. Purser, M.S.P.B.A., asking for particulars of his birds and making an appointment. The full address is Elmdene Poultry Farm, Hullbridge, Hockley, Essex.

We spent two very pleasant afternoons recently. One was in listening to Sir Edward Davson explaining in easy language at the Overseas Club, what Ottawa means to us and what it can do, if all pull together, to help trade and industry and, through that, to lower the number of unemployed. Summing up, one came away realizing how badly off the world is for leaders; leaders to do good without talking, not those who talk without doing good. Also the world wants a lead, and here the Empire can help, as well as, if not better, than any other nation. As the Empire equals a quarter of the world, all must pray most fervently for and act towards that end which will give through Ottawa that lead which the world needs so badly. Our confidence in ourselves, and our determination to win through whatever others do, will in the end act as an example which others will follow, *nolens volens*, if only because they find such an example, and through that such a lead, is good.

* * *

Our other pleasant afternoon was obtained from an open-air lecture in the Physic Garden at Chelsea, delivered in most glorious weather by Dame Helen Gwynne Vaughan (who is a professor, and Doctor of Science, as well as G.B.E., LL.D., and F.L.S., so Sir William Collins, the chairman, reminded us), on "The Contribution of Plants to the Study of Heredity," being the concluding gathering for the season of the Chadwick Trust (Mrs. Aubrey Richardson, O.B.E., is the secretary, at 204, Abbey House, Westminster, S.W.1). Dame Helen is a wonderfully persuasive lecturer; you are forced to let the knowledge and information she distributes penetrate into your mind and brain and keep it there. As you listen, you find it difficult to believe that the late Major Chipp was a student under the lecturer, even if he was among the first batch.

Sir Edward Davson and Dame Gwynne Vaughan surely have one point in common, viz., immense reserves of knowledge beyond or behind anything they make use of when speaking. Wide-flung questions not always actually to do with the subject, whether fiscal, political, or scientific, are answered off-hand by both, just as quickly and clearly as if they had received notice of the queries beforehand, and when answered the replies are carefully made and any that you care to check will always be found correct. At least we have found it to be so on several occasions.

* * *

The thirty-eighth annual general meeting of the Bank of British West Africa, Ltd., was held at the offices of the company, 37, Gracechurch Street, London, E.C.3, the Earl of Selborne, the chairman, presiding.

We understand the Incorporated Society of Planters (Malaya) will this year hold a luncheon instead of a dinner as its annual function in London. The luncheon will take place at the Criterion Restaurant, on Thursday, July 14th, when Mr. G. L. O'Hara Hickson will preside.

* * *

Amber, it appears, according to a leading expert giving evidence in court, is a mineralized resin from an extinct tree. All amber is from 600,000 to 1,000,000 years old, and some pieces contain insects which are now extinct.

* * *

Sir Herbert Samuel, speaking as Home Secretary in the House of Commons, in reply to Mr. Lambert, said: "So far as I am aware, an audited statement relating to the latest Irish sweepstake has not yet been published, but an estimate based on the available material appears to indicate that the amount subscribed to it from Great Britain would be about £3,785,000 (including sellers' commission of about £757,000), and that £2,086,000 was received in prizes.

Altogether in respect of the six Irish sweepstakes so far held, approximately £13,285,000 has been subscribed in Great Britain (including sellers' commission estimated at about £2,357,000), and £7,068,000 has been won in prizes.

From another source we learn that the first prize in the Calcutta sweepstake, the ticket on April the Fifth, amounting to £58,000, was won by Daw Swe, the wife of a Government school teacher in the Taungdwingyi district of Magwe, Burma. Daw Swe sold a half share in her ticket to a Calcutta syndicate for £1,000.

* * *

Writing in *Empire Production*, the organ of the British Empire Producers Organization, Dr. Haden Guest, ex-M.P., who should be back in the House of Commons again, included the following table of the Soviet's exports during their trade year 1929-30. We are not told how much these roubles are worth:—

EXPORTS FROM U.S.S.R., 1929-30.

	AMOUNT IN 1,000 ROUBLES	PERCENTAGE OF TOTAL
Timber	178,758	17.9
Oil products	157,323	15.7
Cereals	121,608	12.1
Furs	83,071	8.3
Piece goods	48,320	4.8
Flax and hemp	40,180	4.0
Sugar	27,345	2.7
Oil cakes	21,585	2.2
Poultry and game	18,607	1.8
Casings and intestines	17,259	1.7
Fish products	15,981	1.6
Manganese	15,199	1.5
Eggs	10,996	1.1
Butter	10,809	1.1
Tobacco	10,227	1.0
Other goods	225,002	22.5

LOCUSTS—CUSS OR CURE.

ALTHOUGH we have had—through lack of space—to hold up articles on the above familiar subject, that does not mean that we have lost interest or hope in the matter, or that our readers have paid no attention to what we have been suggesting and saying. The articles on the contrary have been much appreciated and are still bringing letters and proposals dealing with the magnitude of the task; with this year, at least in some places, an easy winner stimulated by the great difficulties of killing off the locusts by the thousand million instead of by millions only. Certainly the task is prodigious, but is it insurmountable? We trust not.

One proposal was to use crude, fresh sisal juice on the "beasts," flyers or hoppers. We are assured that when fresh juice is used even an elephant would feel the sting. The idea originated we understand some years ago in Yucatan when troubled with locusts and the results it is said were quite satisfactory. More than that we cannot say at present but hope that if the idea is a practical one, it will be followed up.

A reader in France, after studying what we wrote about the use of flame-throwers when fighting locusts, has sent us the following details of what he believes may prove of real use when prejudice against flame-throwers does not exist. "If this method of destruction is not perfect in everyone's eyes," we are told, "I shall be only too pleased to hear of better proposals." Translated from the French, the letter reads as follows:—

"Referring to your various articles on 'Locusts and their Destruction' also to reports at the end of April that clouds of locusts were approaching various parts of Africa, including one swarm spoken of as being 500 miles in width and 1,500 miles from front to rear, yet able to travel at the astonishing—can one say, incredible—rate of a hundred miles a day, perhaps the following particulars may interest both yourself and your readers:—

"Amongst the diseases and pests which are given to attack crops incessantly in different agricultural centres, especially throughout the African continent, of which the number increases each year, there is not one which has been known for so many centuries as the locust. This pest is said to have been included amongst the seven plagues of Egypt, yet to this day the same locust (which is often confused with the grasshopper, from which, however, it has several distinguishing features) each year is the cause of incalculable loss.

"From birth the insect does damage, whilst its voracity increases in proportion to its size, but the young locust is almost as destructive as the fully-grown insect. Their breeding places are usually in barren and uncultivated deserts, portions of the inhospitable Kalahari Desert being mentioned as a

favourite breeding centre, but as soon as the food supply gives out, the locusts, at the hopper stage, advance in numbers like the sands on the seashore, on to the cultivated areas, whilst the fully-grown insects fly to devastate far away districts. Every obstacle is overcome easily and quickly as the young insects advance in one direction, and they leave no trace of vegetation in their path. It is usually wheat and other grain crops which they prefer, but if these are not to be found they eat anything in the vegetable line which they meet. Owing to the speed with which they breed their destruction is difficult.

"Innumerable methods of fighting the locusts have been tried, including shovelling up the insects, destroying breeding places, wire netting as a screen, gassing, introduction of parasites, &c. The most successful method found up to the present is the following:—

"A large number of men, each carrying a flame-thrower on his back, form a line and advance on the swarm of locusts, throwing on to the insects a flame, a mixture of paraffin and fuel oil, projected by heating under pressure. This flame burns the insects and destroys them entirely. This method is effective, it is not difficult to employ, and was recommended in the report issued by the International Agricultural Institute of Rome, which report appeared in 1916, and dealt with the destruction of locusts in various countries.

"The flame-thrower in most general use, and which I prefer, is the 'Vermorel.' This consists of a pneumatic sprayer fitted with a special lance, which runs as long as 13 feet if so desired, and gives a powerful flame which destroys the locusts as described. The sprayer is filled with $2\frac{1}{2}$ gallons of liquid, consisting of one-third parts of paraffin and two-third parts of fuel oil. A pressure of 75 lb. per square inch is then obtained by pumping. The flame-throwing lance is heated, as in the case of a soldering lamp, and then when the tap of the sprayer is turned on, the paraffin and fuel oil mixture is forced out and projects a powerful flame.

"The list prices of these outfits, which, I understand, are made in two sizes, one with a tank holding $1\frac{1}{4}$ gallons and the other holding $2\frac{1}{2}$ gallons are moderate, and bring them within the range not only of those in charge of Government Locust Destruction Campaigns, but of the individual planters who wish to protect their crops.

"When the nature of the country permits, larger outfits are available, and they can be transported on lorries or tractor-drawn trucks, which also carry larger supplies of fuel in casks, from which the fuel is drawn directly by suction. These larger outfits supply four or more flame-throwing lances, and allow of a larger area being covered, and this more quickly."

Rubber Tyres for Railways.

When will they come into general use?

The Rubber Age of New York in its issue of April 10 shows, on p. 17, Mr. Harvey Firestone (well known for the rubber tyres he turns out), shaking hands with Mr. Clifford D. Smith, the development engineer, after the latter's 405.7 mile run between Miami and Jacksonville, when an automobile fitted with pneumatic rail tyres with a metal inside flange had "hummed" over those 405.7 miles in 378 minutes, elapsed time, for an average speed of 64.39 miles an hour, bettering by 42 minutes the best previous rail run between two Florida cities made over a route 40 miles shorter. Deducting the 31 minutes for stops, the actual running time was 347 or five hours and 47 minutes, for an average speed of 70.2 miles an hour.

Commenting on the accomplishment, Mr. Firestone said that hundreds of miles of railroad tracks unused to-day will be put into service again through the development of this new type of transportation. He believes that the pneumatic-tyred wheel will not only be a great boon to the railroad industry in reviving the operation of unused lines, but that it will bring new speed and comfort in rail travel.

Why these rail-rubber tyres should bring unused lines of railways into use again, even in America is not clear to us. Why in the first place are they unused? Have motors on the road cut them out as a transport method? What we are interested in watching is for railways generally to run on rubber tyres attached, as with road motors, to metal or composite wheels. When that day comes, then we can look for three shilling (who whispered three dollar) rubber again instead of a three cent market as at present.

This run was, of course, an exceptional one, even if it covered an area (in American hyperbole) under the blazing semi-tropical sun of the everglades, but what we laymen want to know is: How are rubber tyres likely to behave over the points? If this run was by motor, is there any chance of using the tyres on light railway carriages? If so, would it be necessary to use bogies, if only to increase the number of wheels on the lines? The locomotives, one takes it, would have the present type of wheels, but some say not. Suggestions that the train, or at least individual carriages, might bounce are repudiated. Carry your load low and you will not have that trouble, is the answer.

Of course much is being done over here along similar lines, the Dunlop and Michelin companies especially are said to be making experiments. We wish them luck in their work which would enormously increase the demand for rubber, whilst, unlike most changes, displacing little, if any, labour.

The late Dr. Cuthbert Christy.

Dr. Cuthbert Christy, the African traveller and authority on many things concerning that continent, died suddenly in the Belgian Congo at the end of May. Probably it was the ideal "passing" for such a man, acclaimed as being probably the greatest authority in the world on Africa. If not the greatest, he certainly was the most persistent student on the spot of everything African, from funtumia rubber to pygmies and from the fauna to the labour conditions of the Continent, winding up by being chairman of the International Commission appointed by the League of Nations to inquire into the alleged slavery conditions in Liberia to which we gave prominent notice in our May issue (p. 85). In 1911, it may be remembered, we published his book on "Funtumia Rubber," and the MS. sent in was typical of the man. It was a model of correctness and neatness. Every word typed with no corrections and the whole put up, as if in print, with each illustration—and there were many of them—in its place exactly as it is in the printed book. One feels everything that Dr. Christy ever did was done along the same careful, thorough lines which contributed greatly to the value of his work. He was very fastidious as we found out when including him in the gallery of "Our Friends." The photograph was secured all right but the notes would not come. In desperation our Editor wrote his own views on the subject and was, through that, entirely successful in "drawing" the "Friend" to be. Very angry, Dr. Christy sent the MS. to headquarters, and asked, among other things, where "such a yarn came from; there was practically no truth in the article, the facts being so-and-so," and thus the notes anxiously waited for were obtained and used.

"Some little time back when a cold snap was on, I called," writes a subscriber, "on a friend in my neighbourhood and found him engrossed in watching a lump of 'something' in front of a lighted gas-stove. In answer to my inquiries, he said he was trying to discover whether the article between him and the heat was butter or margarine. As purchased it was butter-coloured, perhaps it had too bright a tint, but when put to soften for spreading, the yellow colour flowed away round the plate and left a lump that looked decidedly like margarine. 'I have,' he went on to say, 'been reading about the spreadability of butter. This stuff does not spread easily. It adheres to neither knife-blade nor bread-surface. I suggest that it is whale-oil and ground-nut compound, highly coloured to look like butter. You will remember that demands have been remade to have margarine coloured any colour that does not resemble butter but the voting went against the idea. That does not say, however, that we want to buy butter that cannot keep its colour.' "

Stockfarming Section.

Fertilizers and Food Production on Arable and Grass Land.*

SPECIALLY WRITTEN FOR "TROPICAL LIFE."

SIR FREDERICK KEEBLE'S latest book, "Fertilizers and Food Production on Arable and Grass Land," has a special message for a paper like ours with the motto: "Increase production—push on consumption." It is many years since we began advocating in season and out of season that in intensive cultivation alone lay any hope for the farmers of the future, and although Sir Frederick's book deals entirely with Great Britain and Ireland, yet the practices which he advocates may be studied with advantage by tropical producers.

Nothing less than an entirely self-supporting Britain will satisfy Sir Frederick, but he is content at this stage to put forward a programme which, within ten years, would increase the production of British farms by 17 per cent. and result in a saving of £100,000,000 on the annual foodstuffs bill from overseas.

Sir Frederick is too wary a bird, if we may use such an expression, to be frightened by the wheat scarecrow. He is not to be found, in this year of grace, attempting to prove that our tiny island could produce sufficient breadstuffs for its huge industrial population. On the contrary, he takes the directly opposite view and insists that more and more reliance must be placed in the future on the great grain growing countries of the world and that the British farmer will best help himself and the country by concentrating on the expensive protein foods.

Meat, milk, eggs, butter and cheese all depend ultimately on grassland, and it is to the improvement in pastoral farming and the tremendous increases in yield obtainable from grass by the use of fertilizers that Sir Frederick looks for the realization of his vision. It is estimated that by the proper understanding of grazing control measures and the liberal use of fertilizers, the grasslands of England could carry seven cows for every four at present maintained. There is no doubt that Great Britain is understocked, even for its present requirements, and the numbers at present carried could be doubled without the slightest difficulty. Pigs could be increased threefold and 10,000,000 additional sheep brought back to take the place of those which have disappeared during the progressive arable decline of the last sixty years.

At first sight it may appear that an ambitious scheme of this kind, if carried into effect, would still further complicate the international trade position by causing a slackening off in the demand for expensive protein foods for the British market. This would not, however, be the case since the money kept at home as the result of this huge experiment in national economy would be transferred from the overseas foodstuffs markets into other channels. It is reasonable to suppose that, from an industrial country like this, a large proportion would be expended on tropical raw materials which so greatly need, at this juncture, all the assistance they can obtain.

The Future of British Agriculture. Fertilizers, Livestock and Intensive Methods.

Viewed in the light of modern scientific knowledge, there is a bright future for British agriculture, we are assured, and for the following reasons. This being so, many of your tropical producers, working along lines similar to those about to be described, should also be able to benefit.

In ten years from now Great Britain could produce 55 per cent. of her total food requirements—instead of only 38 per cent. as at present—and thereby effect an estimated saving in her annual foodstuffs bill of over £100,000,000. This great increase could be brought about quite independently of any subsidies or quota schemes which might be introduced. It depends solely on the knowledge and intelligent use of fertilizers.

Such is the possibility demonstrated by Sir Frederick Keeble in his book. He admits that his conclusions can be judged in one way only. They must be based on evidence. But he proves that fertilizers are the quickest and surest means of increasing our home food-production, by giving ample and convincing evidence of the actual increases obtained by their use and that similar increases may be got from ordinary farm lands under average conditions. This being so, it would be wise for planters generally to study the book.

The Vicious Circle of Decline.

The steady decline in arable farming in the U.K. has caused the gravest anxiety among those who hope to see this country still self-supporting. There are 5,000,000 acres less under arable crops to-day than in 1868 and half-a-million fewer

* "Fertilisers and Food Production on Arable and Grass Lands." 196 pp. Price 5s. net. The Oxford University Press, London and Oxford, or TROPICAL LIFE Publishing Department.

people directly engaged in agriculture. As wheat production in England falls, a vicious circle is begun. Less wheat means less arable area; therefore less green crops and roots; therefore less food for folded sheep; as a result, 10,000,000 fewer sheep than 1868; an ever-dwindling agricultural population; therefore less fertile soil; and therefore again less wheat. Nor has there been any balancing increase in cattle. Each 100 acres now carries only 39 head of stock against 38 in 1868.

The farmer cannot be blamed for his misfortunes over this period. They are due first to the great increase in the production of cheap wheat and livestock in the new virgin lands of the world; and secondly to an absence of the knowledge of how scientifically to increase the productivity of the land over here and elsewhere.

"The film of the earth which is called the soil," says Sir Frederick, "on which all life depends, though marvellous in its perennial powers to sustain the lives of all . . . needs careful management and generous treatment if it is successfully to play the part of Atlas and bear the burden of an ever-growing world of living things." How completely can tropical centres exhaust the plant food in this film, those at one time devoted to sugar-cane production in particular.

Livestock, the Hope of the Future.

But England can never hope to compete in the grain markets of the world. Indeed Sir Frederick definitely recommends that we should place even greater reliance upon overseas supplies for our breadstuffs and bend all our energies to raising, as cheaply as possible, the expensive protein foods—meat, butter, cheese, eggs, &c.—which have so largely and for so long been bought from abroad. Arable operations should be devoted to raising food for livestock; this to be used as a supplementary ration in the feeding of grass. In short, it is our grassland that is the key to future agricultural prosperity. Not only is Great Britain pre-eminently a grassland country, endowed by Nature with a climate in which grasses and clovers thrive, but suitable grass is the only complete food for stock (see pp. 40-61). At the same time, as *TROPICAL LIFE* has pointed out more than once, the same as all that glitters is not gold, so all green foods are not equally nourishing.

Ordinary methods of farming will not suffice. Extensive farming must give way to intensive methods and every acre be made to yield the utmost possible amount of food. A survey made recently in Hertfordshire by the Cambridge Department of Agriculture showed that only on one farm out of four were fertilizers used at all. A similar investigation in Holland proved that scarcely a cultivator neglected his soil. The Dutch farmer uses nine times as much nitrogen, five times as much phosphates, and nearly twelve

times as much potash as the British farmer. No wonder his crops are 25 per cent. bigger! Yet it is significant that in the Holland Division of Lincolnshire—the only part of England where amounts of fertilizer comparable to the Dutch were used—the yields obtained were as good as those of the Netherlands.

England a Country of Small-Holdings.

In his determination fully to prove his contentions, Sir Frederick Keeble devotes much space to examining the experimental work carried out all over the British Isles, and shows that a wider use of nitrogen would have the effect of doubling their stock-carrying capacity. Further, the use of nitrogen in the spring and autumn will result in an extension of the grazing period by at least six weeks; again, when the use of complete mixtures on pastures is combined with a proper control of grazing, dairy cattle can have their entire needs of fresh grass and hay supplied for twelve months by two acres of land per animal (see pp. 61-77).

England is a country of small-holdings (out of 600,000 farms and holdings almost two-thirds are of not more than 50 acres, only one-sixth are over 100 acres in extent). The management of cattle is therefore greatly simplified. Modern farming technique demands that the cattle grazing on pastures should themselves be a part of the machinery used to improve it. The methods of using stock in this way are clearly defined (pp. 111, 120-122).

Estimate of Big Increases.

Sir Frederick's estimates of the increases in production which may reasonably be expected from the combined use of fertilizers and modern methods are significant. Careful to confine himself to conservative figures, Sir Frederick estimates that the yield of cereals might be increased for the whole country by 19 per cent. and still remain below the average for the Holland Division of Lincolnshire. Potatoes could be increased by 18 per cent., sugar-beet by 23 per cent. and mangolds, turnips and swedes by 7 per cent. Hay crops, because of their direct response to simple nitrogenous dressing, could be increased by 41 per cent.

For grassland and livestock the figures are even more striking. For every four cows carried under present ordinary methods, seven could be maintained under progressive methods of management. At present Great Britain is understocked by at least one-third of its potential total and, by introducing more up-to-date methods, the numbers carried could easily be doubled. This would naturally have to be done slowly, since the question of heavy stocking is ultimately bound up with the considerations of adequate water supply, housing, and the risk of disease. But once recognized these can be overcome.

Ten Million More Sheep.

By the use of fertilizers the land could be made to provide for 10,000,000 additional sheep which would bring this country back to the great sheep grazing days of the middle of the last century. Pigs could be increased three-fold and poultry from 70,000,000 to 110,000,000 head. All this vast increase in stock would mean increased consumption of feeding stuffs and the estimated requirements of these cheap carbohydrates would be 5,000,000 tons in excess of the present imports per annum. The expensive protein foods, on the other hand—meat, bacon, butter, cheese and eggs—would all be produced at home with the estimated saving shown above.

Fortunately, the very slowness of cattle in arriving at maturity is an advantage in the scheme put forward by Sir Frederick. At least ten years would be required to make any considerable difference in the present livestock population and it is during that time that the new knowledge concerning fertilizers and better methods of grazing and pasture control could be made more generally known. As the livestock numbers increased more and more grass would be available to feed them.

It is not possible within the compass of a short summary to give any adequate idea of a book so full of statistics and close reasoning, but it must be admitted that Sir Frederick Keeble has adduced ample evidence in support of his case. This, he claims, is not disturbed by any preconceived opinions, however long the experience on which these may be based. Meanwhile, however much of what he has to tell us refers mainly to the U.K.; "huge chunks" and "choice morsels" abound throughout the book for all to read and ponder over, whether they reside in the tropical or temperate zones.

PINEAPPLES.*

IN the *Agricultural Review*, published at Taiwan Noyukwai, Taihoku, Formosa, Mr. S. Watanabe discusses the root-nature of pineapples and explains why some kinds are less liable to wilt than others. Quoting outside authorities to support his own opinion he shows that by stimulating and so quickening the growth of the root system, wilt trouble is minimized as, with a high water content in the soil, the roots grow more rapidly than the fungus can kill them off. Root rot is a great cause of the trouble, and here surely good cultivation to admit air and drain off surplus water *plus* adequate plant food as required will both discourage the disease and encourage the roots and root hairs to multiply,

* We wrote rather fully on the latter part of these notes in the June issue, but as we have received the above and part at least of it is new, we are glad to include it.

and that is all to the good. Water is the great enemy to wilt trouble, but to help, it must be moving freely and not present in excess. The variety of pineapple used also helps, as some lengthen their roots more quickly, whilst with others the roots are shorter but the number (of roots) larger, and again the Smooth Cayenne seems less able and less quick to produce new roots than other kinds.

Those who are talking of building up a tinned (or other) pineapple trade in the Gold Coast should secure a copy (in London, at The Malayan Information Bureau, 57, Charing Cross, S.W.1, or from the Dept. of Agriculture, Kuala Lumpur, F.M.S.) of the February issue of *The Malayan Agricultural Journal*, costing 50 (Malay) cts. or, say, 1s. 3d. post free, and see what it has to tell us on p. 50 and p. 69, when comparing Singapore and Malaya as tinned pineapple producers against Hawaii. In 1930, we are told, the Malayan production of pineapple products amounted to 1,618,919 cases, each 4 dozen tins, against nearly 13,000,000 cases (from Hawaii), each with 2 dozen tins only, but even then Hawaii fully quadruples the present output of Malaya. One wonders, rather, taking the world as a whole, how the output of pineapple products compares with the consumption and whether the Gold Coast being so near the U.K. can grow, can and ship their products to us at a lower rate than other centres. Could that colony even send us fresh pines, with the help of scientific stowage arrangements, to compete with St. Michaels in the Azores? Both Singapore and Hawaii seem too far away from "civilization" to work such a trade, that is if "civilization" wants fresh pineapples. Some claim that the tinned sweetened pine without its acid "bite or sting" is generally preferred. If Hawaii owes its present huge trade to the initiative of one man, will history, one wonders, repeat itself in the Gold Coast. A considerable share of preliminary cultivation and green manures are needed and sellers of cultivating implements and suitable fertilizers should do a good trade where pineapples grow to perfection.

Those who are interested in the study of botany for scientific or industrial purposes, will welcome the appearance of a directory of the botanists of the world, published by Messrs. Baillière, Tindall and Cox, of 7, Henrietta Street, Covent Garden, W.C., under the title of "International Address Book of Botanists," price 12s. 6d. Such a work must prove a great help in many ways, not the least important being the increased facilities it offers botanists of all nations to get into touch, and keep in touch, with each other. We, who know how easy it is to lose sight of fellow workers overseas, feel how very useful such a directory will be to all botanists and many others who look to the trained botanist for help in the same way as you do to the doctor.

GAS v. HARD WORK.



Cartoon by Yates in "The Confectionery Journal."

[Heading by Ed. T.L.]

An increasing number of British business houses are adopting the so-called American "efficiency" methods. The economic condition of America to-day is surely no advertisement for American business efficiency? Cut it out, John! Gang your ain gait!

THE SAFETY OF THE PUBLIC.

It is not our business, of course, whether America continues to run "dry" or not, but in these days, when transport is so swift and easy, and criminals seem to travel more swiftly and easily than anyone else, especially the police of some countries, it is just as well to watch what others are doing and benefit by their experience, especially when luck goes against them. One thing we do claim is that the use of the Big Noise when checking crime greatly lessens the chance of immediate success. If notoriety and hot-press news had not overrun themselves in America, one feels that the truth about the Lindbergh baby would have been known much nearer to the first of March than it was. Whether Prohibition facilitates the committal of such crimes may yet have to be proved, but our own views point that way and we are not alone in this view. Writing in the *Morning Post* recently Major-General Sir Thomas Gallwey

claimed that there can be no doubt that the Lindbergh baby crime is due to Prohibition. If President Hoover abolished Prohibition and taxed alcohol heavily, he would reverse many of the causes that lead to crime, more than balance his Budget, and help to make America and the rest of the world prosperous.

The *Morning Post* itself stated in a leading article that in America society was groaning under a double taxation—by those who are over and those who are under it. In some cases the police are said to be suborned, in others powerless before the ruthless vengeance taken upon jurymen, witnesses, or informers, whose action leads to a conviction. This organization of predatory crime has been enormously strengthened by the Volstead Act, which led directly to a great industry passing into the hands of the criminal, so that the gang is now supported on the profits of the liquor trade, and uses these formidable resources

to corrupt or to defeat the reign of the law. Every American who reads these lines will probably "shout across," telling us to jolly well mind our own business. This is just what we are doing, and having, as outsiders, seen most clearly the effects of the game of Gangster v. Law, if not the game itself, we are quite certain that we will never vote for prohibition in this country, but do everything we can to keep it away as far as possible, although the writer of these lines is a teetotaller.

A Letter from Malta.

THE following is the major portion of a letter just to hand from a reader of TROPICAL LIFE:—

"Thanks for forwarding my copy of TROPICAL LIFE: it has just reached me here at Valetta, where I have come to have a peep at the collection of armour and implements of warfare in the Old Palace of the Grand Masters. I looked round the Hall yesterday, but start the real thing to-morrow, after I have run through some notes I have made regarding dates and periods. These run back, so far as I can remember, to Henry VIII's time, when that Merry Monarch gave the first of the Grand Masters (the Frenchman de L'Isle Adam) artillery, which I suppose included weapons as well as armour, to a substantial degree, and I want especially to study the work in L'Isle Adam's own suit of armour, made I believe in France, and which is somewhere around.

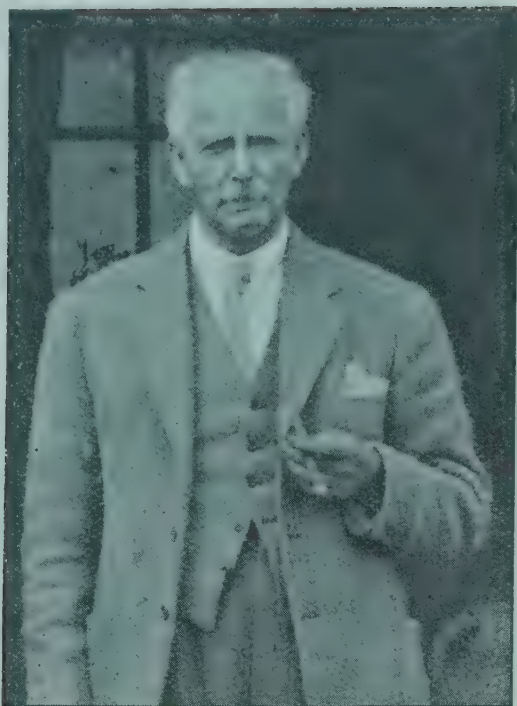
"The Armoury and the Hall of St. Michael and St. George, also in the Palace of the Grand Masters, run the magnificence of St. John's Church, with its painted ceilings, its tapestries and mosaic floors, plus the old monuments, very close as regards history and romance. It only costs £16 for the return sea trip to come to Malta from London; this, with the lifetime of sights and centres to study, some say they go back to 40,000 B.C., but the Phœnician Period from 1450-550 B.C. is old enough for me, makes one wonder why far more visitors from Latin America and elsewhere in the Tropics do not 'call in' at Valetta more often than they seem to. Later on I will try and send you a note or two on my visit, which will, I feel sure, make you understand my surprise."

NOEL COWARD'S historical spectacular play, "Cavalcade," at Drury Lane, has had a wonderful run. It must be over a year since it started and everyone who went to see it at that time and ever since has been struck by the ability of the author to write a play depicting such a long stream of events so correctly and right up to date. In 22 scenes, the action starts on December 31st, 1899, and ends to-day. You go through the Boer War, the death and funeral of Queen Victoria, and so on, episode by episode, up to the Great War

and after. All the tragic events during that long period are shown or conveyed to one's mind in the most vivid manner possible. This is done so clearly, in fact that in our opinion, if there is any truth in the reports that the booking has fallen off, this is probably due to the effect it has had on those who still feel the sorrows of the Great War, as many do acutely, and either tell others similarly affected—for in such matters birds of a feather very closely stick together, all ranks, classes and temperaments—not to go, or else having seen it once they do not go again. Doing so offers a wonderful compliment to everyone concerned, especially to Mr. Noel Coward, who not only wrote the play, but is responsible for its entire production, but also to the acting of Miss Mary Clare as Lady (Jane) Marryot and those who support her, and to Miss G. E. Calthrop who designed the scenery and the dresses to suit the many fashions of patricians and plebs alike during the busy thirty-two years that pass in view. If you want to see wonderful acting under most diverse circumstances, great jollity to great tragedy, then by all means go and see "Cavalcade," for everything is wonderfully realistic, only hasten to do so, as "Last Weeks" are on the boards; but if you have been over hard hit by the war do not be in a hurry to go lest you suffer too keenly by the visit as others have done, even if the war did end nearly fourteen years ago.

SOME little time back we received an enquiry re the use of wire filter cloths when extracting cacao butter and secured a number of answers in respect to same, more than half being against their use, or else saying that they had not heard of them. It seems, however, that with the Carver press the usual filter press cloths are replaced by perforated steel discs. This is an American press, but there is an English firm from whom they can be obtained. Filter cloths of nickel wire and similar material are now being made for other purposes, but whether these are fine enough for cacao presses has to be ascertained. Our old friends Messrs. George Christie, Ltd., of Glasgow, claim that they turn out wire cloths from 12×72 to 28×450 which are perfectly suitable for use as strainers, and any intermediate mesh can be produced, but they are inclined to recommend as a start their 12×72 mesh. Views on this not unimportant subject from our readers will be much appreciated.

Those good old days.—"An almost infant climbing boy, in the act of sweeping a chimney in the Strand, stuck fast, and the pile had to be taken down before the sufferer could be released. Happily he was uninjured."—The London *Public Ledger*, 100 years ago.



[By courtesy of "The Oxford Mail."]

"Tropical Life" Friend.

No. 325.

SIR FREDERICK KEEBLE, C.B.E., SC.D., F.R.S.

Controller of Agricultural Research, Jealott's Hill, near Maidenhead.

IN this number we review at some length an important book by Sir Frederick Keeble, the Director of Agricultural Research for Imperial Chemical Industries, Ltd. It seemed to us, when this book was published, that the moment had come for an omission, long overdue, to be rectified. Accordingly our representative journeyed to Maidenhead, sought out Sir Frederick, and invited him to take his place as "Our Friend" in our little monthly portrait gallery.

The talk ranged over a wide field. We discussed the importance of the work of TROPICAL LIFE and its motto "Push on consumption—increase production" which has received such wonderful confirmation from Sir Frederick's book. We talked of coffee production in the Brazils and cacao in West Africa. We talked of sisal growing and of our pet subject, "Locusts—cuss or cure." Indeed, so interesting was our conversation that it was only when it was drawing to a close that we remembered the primary object of my visit—namely to discuss with Sir Frederick his manifold activities during and since the War.

As everybody knows, Sir Frederick was, in the War years, Controller of Horticulture in the Food Production Department of the Ministry of Agriculture and, in that capacity, was responsible for organizing production on the part of small-scale cultivators.

For a year or two immediately after the War, Sir Frederick held the post of Assistant Secretary in

the Ministry of Agriculture, and he began at that time the organization of horticultural production throughout the country. Later he was appointed Sheldonian Professor of Botany in the University of Oxford, a post which he held for five years, only resigning it to take up his present position as Controller of Agricultural Research for Imperial Chemical Industries, Ltd.

Prior to the War, he was led by purely scientific work to conclude that the soils of the world were suffering from a shortage of supplies of nitrogen and other plant foods, and he carried out experiments with the late Lord Melchett on his estate in Hampshire to show the effect of fertilizers on grassland. These experiments verified his conclusions, and convinced him that really high production from grassland is only obtainable when the mineral and nitrogen deficiencies of the soil have been made good.

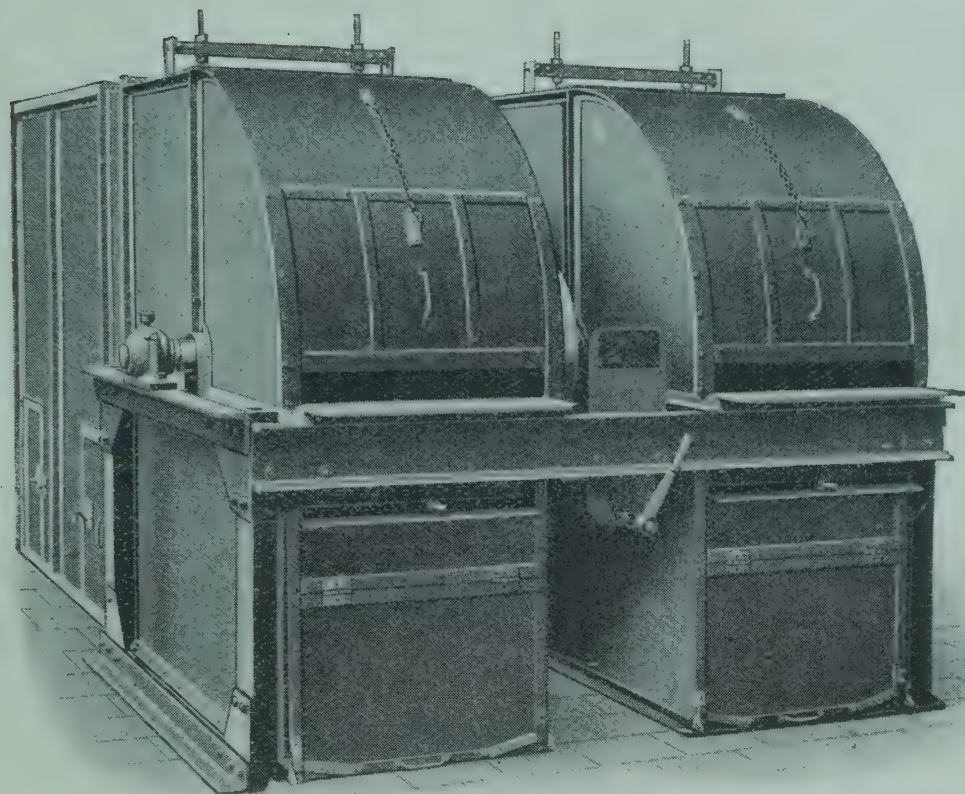
As Controller of Agricultural Research at Jealott's Hill, he has seen these early experiments assume world-wide importance, and his own boundless activity build up, within the short space of five years, a research organization second to none.

"The policy which underlies the foundation and maintenance of Jealott's Hill," said Sir Frederick as we parted, "is not only to discover how the scientific use of fertilizers could increase the production of food whilst reducing its cost, but also to investigate the effects of the food produced by this means on the health, well-being and productivity of the world's live stock. As Sir Harry McGowan claims in his Preface to my last book, 'Without prosperity—or at least solvency—it is idle to call upon the farmers to increase their production. Yet this must be done, for an increase in our home production with its corresponding decrease in imports must be secured if we are ever to redress the national balance of trade.'"

Before leaving Jealott's Hill, we were conducted on a short tour of the Station, and were duly impressed by the number of subjects which are there being investigated; more impressed still at the incredible activity and keenness for work displayed by the entire staff. But we had realized from earlier conversations that the team spirit of Imperial Chemical Industries, so well known outside that great organization, is no empty boast, but is made possible by the appointment of such men as Sir Frederick Keeble, to ensure not only the smooth working of the machines in their charge, but also to give due consideration to the comfort and well-being of the mechanics.

Good luck to such efforts; may those engaged in the work enjoy the benefits of the luck we wish them and which they deserve for such continuous united efforts, and may the public, who will have the advantages accruing from these studies, appreciate the efforts put forth on their behalf, since as the French say: "*Celui qui n'a ni bouche ni éperon pour travailler à fond demande néanmoins de la nourriture pour la même bouche.*"

THE NEW "BIJOLI" SISAL-BRUSHING MACHINE WITH DUST-COLLECTION CHAMBER

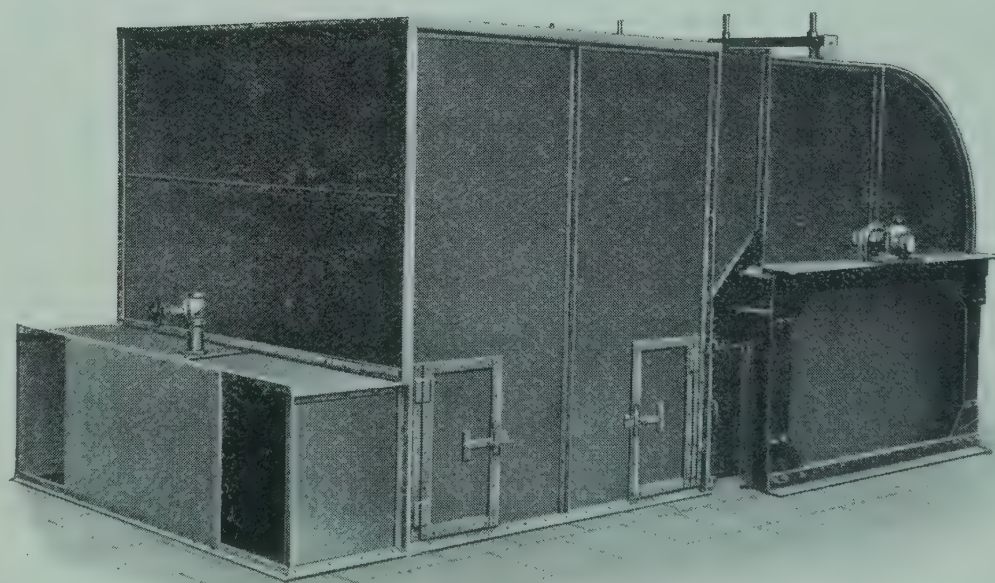


No. 124

Front view of
"Bijoli" Twin Hand-
Fed Brushing Machine
with dust collecting
chamber at the back.

No. 125

Side and back view of the "Bijoli" Sisal-Brushing machine showing large cleaning doors in dust collecting chamber and water regulating valve on spray box for precipitating the dust. There is a sump and drain underneath which cannot be seen in the picture.



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HERE AND THERE.

The Ross Institute.

Why are YOU not a Subscriber?

THE equivalent of a £ sterling, especially in these days, if sent once a year to the Secretary (Major Lockwood Stevens) of the Ross Institute at Putney Heath, London, S.W.15, would not seriously be missed by any reader of this monthly, even when the day comes for remitting it. Just a scrap of paper, that's all, but a pile of those scraps of paper means so much to the management of the Institute. Yes! but a hundred times more so perhaps to the sender himself one day or certainly to one or more of those around him. Please therefore do not hesitate, for, even with the commodity world based on rubber at 2d. lb. or sugar at the equivalent of 0.51 ct. (just $\frac{1}{4}$ d.) lb. f.o.b. Cuba, you can still manage it. The pain at the most will only be like a kiddy with a piece of cotton attached to a loose tooth, which wants so badly to part company with its owner (just like your subscription-to-come does), and all that is needed is the will to pull the equivalent of that piece of cotton and then at once, all are smiling and you will feel—like the kiddy—proud and satisfied at the effort you have made. Please therefore Mr., Mrs. or Miss Reader, act accordingly and do not wait until you yourselves, or those around you, need attention. Send a subscription now to help others who need such help from you any and every day.

Take only one section of the work being done, viz., the Department of Tropical Hygiene in connection with malaria, say, during the year 1931 and think what it means to those working in the areas mentioned. Think also of the cost it means day in and day out to the Ross Institute, which has to find the money for this valuable and costly work. To the big copper mines and elsewhere in Northern Rhodesia, Mr. C. R. Harrison, the malariologist, has been more than once, so has Sir Malcolm Watson. Zambesia, Nyasaland, Port Beira and elsewhere around also saw Mr. Harrison last year. Sir Malcolm also went to Italy in connection with Mr. R. Senior White's anti-malarial investigations over there in 1929, and after that to Holland. In Assam, Dr. Ramsay has been searching for a thoroughly efficient anti-malarial oil and has, one is glad to think, found a very effective one. Then he visited Burma to carry on similar work, and these are only a few of the scores of such work and workers.

At the Institute itself training experts-to-be, as well as planters, engineers and others (exactly like yourselves, ladies and gentlemen) in anti-malarial work, mosquito investigation and malaria problems generally is always going on. Those who are unaware of these courses would be surprised at the numbers who turn up

at the lectures and the immense good it does to them, and far more important how it enables them to do good to others when overseas, but all this costs money. So do the drugs, apparatus, overhead charges, &c., &c. Will therefore every reader of this appeal send at least 10s. (the equivalent of a first tooth, a little tweak only) or perhaps 20s. (and be a real grown-up) to Major Lockwood to show him what a huge, wide-flung circulation we have and, that proved, to enable him to pass the thousands of pounds he is to receive on to his treasurer. Should you by any chance be under the delusion that we have exaggerated the importance and magnitude of the work being done, please write to the Secretary, Ross Institute, Putney Heath, S.W.15, and ask for a copy of their last report.

The Destruction of Wild Life.

ALL over the world, the Press and Society reports keep telling us, wild life is being destroyed far more speedily than it can reproduce itself.

The march of civilization, firearms, "sportsmen" who shoot from motor-cars and even aeroplanes, and disease, all take an ever-increasing toll of animal life until it has been computed that in less than half a century the elephant, the "rhino," and the hippopotamus will be extinct in their natural haunts, lions and tigers will be nearing their end, and gorillas as much a memory as the great auk or the dodo.

To prevent this thing coming to pass Societies and Governments all over the globe are taking what steps they can.

Within the British Empire there is more wild life and a greater menace to its continued existence than anywhere else. Here the fight against destruction is carried on by the Society for the Preservation of the Fauna of the Empire.

At the moment Africa and Malaya are occupying the attention of the society, but much work is to be done in India, where the political situation at the moment has put a stop to investigation. As a rule the advance of civilization can be accomplished without undue menace to fauna if a little forethought is exercised. Unfortunately the wish to think far too often is stifled and the destroyer of life for the mere pleasure of killing—perhaps of boasting ever after what a killer he has been—stops at nothing to achieve his object.

How to check such a thing? Why not sentence everyone engaged on such expeditions, women as well as men, to be gently dropped from an aeroplane, without any clothing at all except their footwear and leave them for a week or more so as to give them time to realize what it feels like to be the unprotected sport for others to have a good time over?

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Tropical Life.

JULY, 1932.

The Royal Empire Society.

A Taste of Our Imperial Parliament of To-morrow.

Specially written for TROPICAL LIFE by a F.R.E.S.

THE Royal Empire Society brought to a conclusion this season's series of luncheon speeches on important topical subjects in a way that was truly worthy of that august and useful body, for as I sat listening to Mr. Winston Churchill and Sir Robert Horne discuss before a gathering of most attentive listeners that topped four hundred, the remonetization of silver, and how commodity prices might be raised by wise statesmanship, one could not help wishing that we were all members of that Imperial Parliament which must be ours sooner or later if the Empire is to go ahead and prosper instead of marking time as it is doing at present.

Comparisons may be odious, but they are often useful and necessary, and so one can be excused if on such an occasion we compare those four hundred women and men in calibre and person, and in their knowledge of the Empire, with any four hundred members of the House of Commons. What nook or corner on land or water within the Empire could have been mentioned that would not have brought not one, but several, of those present to their feet instantly, willing and able to answer questions from personal knowledge. Surely one can say "That's the stuff to give them," if you wish to legislate for the Empire along the best possible lines, viz., to rule the Empire by those who know the Empire by personal experience, and not by those who "gas" at home to others (who send them to Westminster, thanks to the Ballot Box), about places and people they have never come into real contact with, merely because the voters know less, if possible, than the local candidates for the present Parliament of a mighty Empire. The war, international gold hoarding, the tampering of currencies, have in turn no doubt helped to aggravate the depressed state of the country, but the Ballot Box that can send, and does send, any man, expert or ignoramus, to the House of Commons, merely because he can out-talk those around him, is surely the greatest of all the causes. Doing so saddles us with men who do not know the Empire any more than recent politicians knew finance and so were ignorant as how to pay the huge bills that they ran up on the credit of the Nation, a Nation that outsiders felt would pay, once the spendthrifts had been disposed of as they now are.

If you turn to the *Times* of June 16, you will find on p. 11 the excellent speech of Mr. Churchill

produced almost in full, followed by the carefully worded remarks of Sir Robert Horne, who followed him. Lunch was over at 2 p.m. sharp, and the gathering broke up at 3 p.m., the two speakers dividing that hour almost exactly between them. Mr. Churchill, starting first, told us how he considered that "they were met in the City of London because our weights and measures had been tampered with. Gold had been cornered, scrambled for, and hoarded. In the last few years the price of gold had risen by nearly 70 per cent., and the value of everything else had fallen in like degree. They knew that the fault lay with gold or with those who had mishandled gold. It did not lie with the many thousand other commodities measured by gold." Having digested that, turn to p. 113 in the June issue and refresh your memory with this speaker's remarks on the silver question.

"The odd thing," he went on to say, "about the cornering of gold was that no class had benefited from it. Every nation and every class had suffered. All creditors, whether national or individual, would, if this went on, be faced increasingly with the insolvency of their debtors. Already the world was breaking out in moratoriums. Nations who had played the principal part in cornering the gold measures of the world were suffering as much as those who had not impounded the long-accepted world currency."

Sir Robert Horne pointed out that "people who tell you that you must not inflate can very seldom give you any reason why you should not do it. In the last resort they are forced to say that you must never begin it because you cannot stop it. They are like people who would refuse a drop of brandy to a man with a heart attack in case he should take to drink." And then he went on to say that "he foreshadowed a position in which by 1941 there would not be enough gold to provide the world with sufficient currency, and said that he had for long held the view that the best solution of some of our present troubles would be to unite silver with gold as a basis on which the world's business might be conducted.

"Eighty per cent. of the silver produced in the world came from composite mines where they were found, together with silver, lead, zinc, and copper. The periods when the world wanted lead, zinc, and copper were in prosperity, and it was in periods of prosperity that the most currency was needed. Here was Nature's own device for supplying us with a currency when we needed it. Silver was not simply a commodity. It was also the money of a vast population. Silver as a part of our currency would increase the value of the savings of that population and have the result of producing immediate orders for goods from our manufacturers which those people required."



EAST AFRICA.

Empire Building Overseas v. Time Killing at Home.

From an Occasional Correspondent.

I WAS glad to see that you devoted the leading article in your June issue to the Report of the Joint East African Board. Anyone who heard the speech of Sir John Sandeman Allen, M.P., as Chairman at the Annual Meeting would, I am sure agree with such a comment, especially after the remarks of the last speaker when supporting the vote of thanks to the chairman. After telling us that he had travelled all the way from South Wales to attend the meeting because he knew of the splendid work the Board has done and intends to do, he expressed regret at the way many well-to-do men over here killed time (my phrase, not his) playing golf or bowls, worse still in watching others play, instead of utilizing their leisure going to see how good East Africa is to settle in and work in, and then return home to spread the news among their neighbours.

Returning to your article, you certainly hit the nail on the head when you talked about "the duties clamoured for by members (and by how many more who do not send in their guineas to join)." Here may I quote one paragraph from the Chairman's speech mentioned above, especially as your article also gave prominence to the matter. "I would like first of all," Sir John told us, "to

refer to a domestic matter in connection with the Board, viz., the new arrangements we have been able to make, thanks to the generosity of some of our friends. We have now had more than a year's experience of working in our own office with a full-time secretary, and we are quite satisfied that this has already proved to be a very real advantage to all the interests with which the Board is concerned. We feel quite sure that those friends who have made all this possible will realize that they have thereby been of real service to all mercantile and other interests in the East African Territories."

I do not know what financial help has been forthcoming from a "few friends," but the fact that they thought the welfare of East Africa was worth the money given shows how right TROPICAL LIFE was to claim that those who do not already subscribe to the J.E.A.B. either in East Africa or elsewhere if they trade with that part of the Empire, should do so willingly. Having more faith in human nature than some folks, I believe the Board's subscriptions will increase, in spite of hard times; they certainly will if representatives of the Board get into personal touch with non-subscribers.

EAST AFRICAN DINNER.

Sir Philip Cunliffe Lister, M.P., Chief Guest.



[Photo by Swaine.]

WE fully agree with our contemporary *East Africa* when, in their issue of June 30th (which contained a fairly full report of the speeches and much other valuable political matter to do with East Africa), they claimed that the above gathering this year was fully up to and even a bit over the mark, although we looked in vain for a score or more of the many good friends of that part of the Empire who were not present. Of course it must be remembered that the last half of June was, as usual, a very busy time for functions of all sorts, Imperial gatherings, overseas' club dinners, etc., and as no one can be in two places at once a number were elsewhere who would like to have been at the Savoy on June 22nd when the dinner took place but could not manage it.

Lt.-Colonel Charles Ponsonby took the chair, and if he did not exert his voice as some chairmen can do, he said the right things in a nice way every time. On his right sat Sir Philip Cunliffe-Lister and, a little further on, Sir William Gowers, whose retirement from the governorship of Uganda we all regret, but we were glad to see Sir William back home looking the picture of health.

At a centre table we noticed Mr. Campbell Hausburg, chairman of the Sisal sub-committee of the Chamber of Commerce, and close by Sir Edward and Lady Davson and Sir Humphrey and Lady Leggett. The banking world, interested in East Africa, was well represented by Sir John Caulcutt (a director as well the the

manager of Barclays D.C. & O. Bank) and Lady Caulcutt; they were at the same table as General Sir Hubert and Miss Gough.

TROPICAL LIFE was represented by its managing director, Mr. Alfred Bale, who is a member of the E.A. Dinner Club, and also by its Editor, who had as his guests Señores Martin and Diego de Cossio, the London representatives of the Henequeneros of Yucatan. At their table were Mr. and Mrs. Alfred Wigglesworth, and facing page 123 we show how that lady occupied at least a short portion of the time. Following the dinner a reception was held upstairs and attended by those who did not live too far off to be unable to dally awhile, and we are glad to believe that several informal "chats" took place between the representatives of Yucatan and East Africa.

There is one portion of the Chairman's remarks which we should like to call attention to, *viz.*, his reference to the late Lord Delamere when he said: "We have to record the death of Lord Delamere, a true pioneer of East Africa and one whom we all delight at all times to honour. Everyone here, and how many more elsewhere, know of the charm of his personality and the greatness of his vision. Those of us who have travelled in Rhodesia know that as soon as a town there reaches a position of any importance, almost its first step is to erect a statue of Cecil Rhodes. Nairobi, or some leading town in Kenya, should erect a monument of a *permanent nature* to Lord Delamere who devoted all his life and energy to the Colony."

Lancashire Cotton the Best.

Why it is so.

THERE are those, and the number probably is considerable and widely distributed, who have a fixed idea that the "hot stew" of the Indian climate is ideal for cotton spinning and that this is why that country produced—perhaps still does so—such wonderfully fine, gauze-like muslins as well as the coarser cloths used by the multitude. According to one of the leading firms in Manchester, with experience of both Swiss and English factories as well as of those working in India, Brazil, and elsewhere, the above ideas concerning India are mistaken. When forwarding to them an enquiry for a big plant that we received we mentioned the above views and received in reply, the following statement:—

"With regard to the relative facilities for spinning in India against England, the facts you laid before us are incorrect. You state that, 'India has always been able to spin such fine counts.' As a matter of fact India does not spin what we call fine counts.

"The spinning of fine counts is practically confined to Europe and North America and in this, Lancashire is pre-eminent. Special climatic conditions have to be created (not taken for granted) and these conditions must be invariable no matter what the weather is like outside. Mills, therefore, in regions where the climatic conditions vary enormously, would present greater difficulties than in other countries where there are no extremes. It is possible that at certain times of the year in India the natural climatic conditions would closely resemble the artificial conditions which have to be created, but at other times the reverse would be the case and it would probably be difficult to maintain stable conditions.

"Meanwhile, other things besides climate have to be considered when thinking of fine spinning. The great bulk of the cotton cloth produced is for native use and this is not made from fine yarns. Yarns for these bulk goods can be produced satisfactorily in almost any part of the world and for such cloths climatic conditions are of minor importance.

"And so, all being as it is, Lancashire stands pre-eminent and holds its own in the fine spinning trade; but for other classes of goods, i.e., the bulk trade, we have to compete with the rest of the world, but even here we probably surpass most others, only tariff walls and cheap native labour make competition difficult.

* * *

Another enquiry re Ramie fibre brought the following reply, "Neither ramie nor its analogous fibres lend themselves naturally to being spun as does cotton. Even if spun wet, when dry, the constitution of these fibres would tend to 'unspin.' No process, so far, has been discovered which will permit these fibres to compete with cotton."

* * *

Dr. Ping Ling, Ph.D., Chinese Minister to Cuba, who was the guest recently of the Chamber of Commerce, Port of Spain, Trinidad, West Indies, at its Ordinary General Meeting, addressed members on the world depression which he ascribed more to under-consumption than to over-production and gave illustrations to show where China was a possible new market. He invited business men to advertise their goods in China and to enter and keep that market, and expressed the opinion that in that way what now seemed over-production would not be sufficient to meet all demands.



MARKET REPORTS, GOSSIP AND PRICES.

WITH Ottawa right on us it will be as well to remember when fighting by one means or another to get more trade, and through that more employment for our own people, that all the world is not down in their percentage of production so far as bulk is concerned, but what profit or what level of payment comes out of that bulk for capitalist or workman we are not told. There is one point Labour everywhere outside Japan and Russia has to realize, if the workers do not wish to cripple the resources of their country by living chronically on the dole, and that is: Those who

want orders, whether for raw materials or manufactured goods, must either increase the output per 20s. (or its equivalent in other currencies) received as wages; or take lower wages. The Unions can talk themselves dead about standards of living, living wages, etc., but if all they achieve by such "gas" is increased unemployment one fails to see where the standard of living is improved. Half a loaf, even a quarter loaf, is better than no bread. Living on the dole from year to year seems to cause many to forget this, but one day the dole, at any rate in this country

will have to cease, and those who have depended on it, father and son, mother and daughter, grandchildren as well, will learn the truth of this claim even to the quarter loaf. The country meanwhile is sure to come an ugly crash when it cannot continue to keep the masses in money without working for it. Whether the masses are entitled to such money will not soften the Fate in store one jot, the only thing to do is to face facts, and if Labour in this country will not absorb the unemployed and work at 50 per cent. of the present standard of living, *i.e.* on the half loaf, it is to be hoped that later on the cause of the trouble to come, like the guilt of starting the Great War, will be nailed down to the right people, whether they be weak-minded leaderless Governments or greedy, selfish Trade Unionists.

It was, we believe, the German Institute of Economic Research which claimed that up to December (1931) last, the world as a whole was manufacturing only 74 per cent., say even three-quarters, of what it made three years ago, *i.e.* in 1928. This is difficult to believe and yet one feels it to be true, and in a table drawn up (but out of date by now) to show the present ratio of production against that of 1913, whilst Russia stands at 251 against 100 in 1913, Japan is put at 222, Sweden 168, Canada 147, France and America at 100, whilst the U.K. is put at 83 and Germany 62 only. Belgium is not mentioned, which is a pity. As already asked, what ratio of profits and wages do the countries which have increased their production show on such out-turns? Are they better off than if they had no loaf at all, or do they work for a quarter, half, or even a whole loaf compared with profits and wages in 1913 and higher costs nowadays. Who can say? Will Ottawa tell us, and if it is found best to give everyone, in this country, half a loaf instead of many having whole loaves and others no loaf at all, or the dole at the best, will steps be taken to bring about such a much fairer treatment for all, especially if, at the same time, our ratio of production can run, like that of France, at 100, or whatever the figure is to-day?

Moving on to our usual market gossip, we come to:—

Rubber.

THIS market seems to portion out its gossip according to the price of the commodity, and so just now we get little price, little gossip. An exception is the *London Public Ledger*, which had more than usual to say, both of producing and manufacturing centres. One of their items of news claims that reports from Batavia speak of 313 rubber estates having completely stopped tapping, whilst 133 have partially stopped. This gives an area out of tapping amounting to 168,396 acres. If present prices continue, further drastic reductions are expected although some estates

(foolishly we should imagine) will tap recklessly and to excess. America seems to be proving disappointing with rubber as with other commodities, the consumption there is poor and stocks heavy.

Turning to Messrs. Lloyd, Matheson & Carritt's last two reports, we find that the American stock, on hand and afloat at the end of May, stood at 396,687 tons, against 383,485 at the end of April, and 294,360 tons at the end of May last year. Consumption, in America, stood at 29,197 tons for May, 25,953 tons for April, and 37,820 tons during May last year. One is not surprised, therefore, to hear folk say that the consumption in America is disappointing. These reports then go on to give prices as under:—

SPOT QUOTATIONS—	1932		1932		1932		1931	
	JUNE 22ND		JUNE 15TH		JUNE 8TH		JUNE 24TH	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	1 $\frac{3}{4}$	0	1 $\frac{1}{6}$	0	1 $\frac{1}{6}$	0	3 $\frac{1}{8}$
Crepe (F.A.Q.)	0	2 $\frac{7}{16}$	0	2 $\frac{3}{8}$	0	2 $\frac{3}{8}$	0	3 $\frac{3}{16}$

FORWARD POSITIONS—	JUNE 22ND		JUNE 15TH	
	SMOKED SHEET		SMOKED SHEET	
	s.	d.	s.	d.
1932, June	0	1 $\frac{3}{4}$	0	2 $\frac{7}{16}$
„ July	0	1 $\frac{3}{4}$	0	2 $\frac{7}{16}$
„ July/September	0	1 $\frac{3}{4}$	0	2 $\frac{7}{16}$
„ October/December	0	1 $\frac{7}{8}$	0	2 $\frac{1}{2}$
1933, January/March	0	1 $\frac{1}{2}$	0	2 $\frac{1}{2}$
„ April/June	0	2	0	2 $\frac{5}{8}$

STOCKS—	1932	1931
	TONS	TONS
London, Week ending June 18th	52,636	82,919
Liverpool „ „	58,601	54,422
Total	111,237	137,341

SINGAPORE QUOTATIONS—

June 22nd.—Spot, 5 $\frac{1}{4}$ cents; July/September, 1932, 5 $\frac{3}{8}$ cents; October/December, 1932, 5 $\frac{1}{2}$ cents.

June 15th.—Spot, 5 $\frac{1}{8}$ cents; July/September, 1932, 5 $\frac{1}{4}$ cents; October/December, 1932, 5 $\frac{1}{2}$ cents.

Vegetable Oils (London and Liverpool).

THE palm oil market according to reports from Liverpool is quiet, with Lagos quoted at £15 10s. June-July (sellers); softs on the spot £14 5s., against £14 10s. for June-July, whilst Mediums, June-July, are put at £15 10s. and red Sherbro £14 10s. per ton. The cake market is firm for linseed and cotton cake and quiet for coconut and Soya-bean cake. Prices include £7 10s. to £7 15s. ex mill for London-made linseed cake and £7 for Bombay ex ship. For cotton cake London-made stands at £4 12s. 6d. to £4 15s. ex mill, with 10s. less for Egyptian on the spot. Bombay groundnut cake is put at £7 per ton on rails, whilst English made Soya-bean cake is worth £7 12s. 6d. ex mill.

With regard to the other products we will start as usual with:—

COPRA PER TON.

	CEYLON F.M.S.			JAVA F.M.S.			STRAITS F.M.S.			PHILIPPINES F.M.S.			SOUTH SEAS F.M.S.		
June	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
25	15	0	0	13	17	6	13	15	0	13	2	6	13	2	6
22	15	0	0	14	0	0	13	15	0	13	2	6	13	2	6
18	15	0	0	14	0	0	13	15	0	13	2	6	13	2	6
15	14	10	0	13	10	0	13	5	0	12	12	6	12	12	6
11	14	10	0	13	10	0	13	5	0	12	12	6	12	12	6

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation f.m.s. £13 5s. on June 25th.

OTHER OILS PER TON.

	CASTOR FIRSTS		GROUNDNUT CRUDE*		COTTONSEED CRUDE EGYPT		LINSEED SPOT†		SOYA BEAN SPOT, NAKED		PALM KERNEL OIL‡	
June	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.
25	35	10	33	5	20	0	14	0	21	5	21	0
22	35	10	33	0	20	0	14	0	20	5	21	0
18	35	10	32	10	20	0	14	0	20	10	20	10
15	35	10	32	0	20	0	14	0	20	10	20	10
11	35	10	32	0	20	0	14	0	20	10	20	10

Soya-bean Oil. Oriental to the Continent, June/July is worth £17 5s. in barrels.

* Crude, naked.

† Net, naked, ex-mill.

‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL) CALCUTTA		COTTONSEED EGYPT BLACK		CASTOR BOMBAY		SOYA BEAN GROUND-NUTS		MANCH. AFLOAT	
June	£	s.	£	s.	£	s.	£	s.	£	s.
25	9	7	7	11	5	15	11	2	14	3
22	9	7	7	13	5	13	11	0	14	5
18	9	6	7	11	5	12	11	0	13	15
15	9	5	7	11	5	13	10	12	13	10
11	9	3	7	11	5	11	10	2	13	5

COCONUT OIL PER TON.

Ceylon mill oil on June 25th was quoted at £28 10s. per ton for spot parcels against £21 10s. (cylinders) for June/July shipment. English deodorized in barrels is worth £32 15s. against £33 15s. last month.

Desiccated Coconut.

This market ruled dull towards the end of June, with news of fine having been sold on the spot at 23s. 6d., against 23s. quoted for medium. Halves, July/August, are quoted at 19s. 6d. per cwt., c.i.f.

Coffee.

Our contemporary and near neighbour, *East Africa*, published the following important statement in their issue of June 23rd, a statement that will be closely followed by all coffee men.

"We learn," they tell us, "that a considerable proportion of the forthcoming Native-grown Kilimanjaro coffee crop is likely to be sold at auction in Nairobi; that the largest coffee combine in Uganda has made similar plans; that planters in the Belgian Congo, who have been exporting their crops *via* the West Coast—and waiting up to ten months for the proceeds of the sales—are attracted by the idea of selling in Nairobi and receiving cash within a month of the dispatch of the coffee from their estates; and, finally, that this year's Kenya coffee crop promises to be about double that of last season. There

is thus every indication that the Nairobi sale rooms will be called upon to handle a rapidly increasing volume of trade and that Nairobi will become an important coffee buying centre. European and American business houses have been closely watching developments during the past year, and at least one important company with large Central American and Continental connections has established itself in the Kenya capital. Now there is a definite recent growth of interest on the part of Canadian, American, and Continental buyers, to whom it will be a facility to find all types of East African coffee purchasable in Nairobi. Kenya planters, until recently opposed to the entry of foreign-grown coffees, lest pests and diseases might be disseminated by their presence, have withdrawn their objections now that cheap and effective treatment has completely abolished any such risk. To avoid misunderstanding it may be well to reiterate that the Nairobi auctions are not intended to replace London, particularly in its function of supplying the British home trade, but to provide a new, more expeditious and more convenient service in the export of East African coffees to other consuming countries."

That fact of getting your money cash down, or at latest within a month, is an enormous advantage to all producers, no matter what his crop may be, but we still doubt if it is as important as the ability to force all buyers to operate from one common centre, buying either in person or through agents as can be done, and only be done, by sending their fine coffees to London. This splitting into halves of the world's buyers of good to fine coffees, must and will knock shillings off the prices obtained both in London and at Nairobi and has already, in our opinion, been the cause behind the complaints of so many sellers of the best kinds of coffee that prices are below expectations. Of course they are below, and the more buyers flock to Nairobi the greater will be the drop year by year. We may be wrong but, like those who think otherwise, we can and will sit up and watch results.

Coming to sales and prices in London, values around June 18-23 ruled as under:—

Jamaican. Fair to good bold mountain-grown, 164s. to 205s. 6d.; small, 124s. 6d.; peaberry, 147s. to 176s.

Kenya. Bold common, 52s. to 56s. 6d.; bold fair greyish and greenish, 70s.; fair to good bold, 70s. to 88s. 6d.; small 56s. to 58s. 6d.; seconds, fair to good, 57s. to 78s.; medium, 61s.; peaberry, 65s. to 75s.

Uganda. Bold common, 53s. 6d.; bold Robusta, 53s. 6d.; medium, 50s. 6d.

Toro. Bold, 55s. 6d.; common medium, 56s. 6d.

Of East Indian kinds:—

Mysore. Bold fair to good realized 77s. to 103s., seconds 71s. 6d. to 75s. 6d.

Colombian.—Medium greenish realized 58s.

Costa Rica.—Bold common greenish, 95s. 6d. to 102s.; bold fair greenish, 106s. to 112s.; fair 105s. to 107s.; good, 116s. to 119s.; fine, 140s.; seconds, 73s. 6d. to 80s., and 74s. 6d. to 112s.; small, 55s. to 64s.; peaberry, 92s. to 148s. 6d.

Cotton.

COTTON production, at any rate, so far as that produced in the U.S.A. is concerned, is a remarkable proof of the need of suitable and adequate supplies of fertilizers. Take two extracts from our last budget of news, both from America (via *Cotton* of Manchester): "It is recognized that the critical period for the plants lies ahead, and with poor fertilization of the land and increased insect activity these promise to become factors of importance later in the season," then a week later, "the question of poor fertilization is also kept prominently to the fore, the contention being that it will have an important effect upon the yield per acre." If the U.K. is centering its hopes on Ottawa, whilst keeping Lausanne under close observation, American cotton circles are all eyes and ears apparently for Lausanne.

Coming to actual market gossip, whilst the several million bales of cotton directly or indirectly controlled by the U.S. Government and its policy in regard to this cotton, continue a source of anxiety to the South and the trade generally, the taking of American cotton by the mills of the world to date are over 2,000,000 bales ahead of those to the same date last season, and it is considered that the very cheapness of the raw material should bring about a larger consumption and the advent of outside support. Meanwhile, if buyers persist in holding aloof of the market, sellers down South are exercising no selling pressure.

Moving on to prices, the following were the official "spot" prices in Liverpool on June 24th, and on the corresponding dates in 1931, 1930 and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	4·41*	4·31*	5·17	7·64	6·84†
Strict Middling American	4·46*	4·36*	5·32	7·89	6·96†
Fair Pernam	4·46	4·36	5·22	6·94	6·93
F.G.F. Sakel. Egyptian	6·30	6·05	7·90	12·20	9·60‡
Fine Broach	4·08	3·94	4·35	5·35	6½
Fine No. 1 Oomra	3·99	3·85	3·93	4·70	6
Fine Bengal	3·70	3·56	3·68	4·35	5¼§

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Other Products.

THE tea market is disturbed. Buyers maintain that they need time to catch their breath, and holders wish to urge them on to buy without a break. This naturally tends, especially when the quality is not too good, to pull down values, in

extreme cases as much as 2d. lb., and with over-supplies of common and low medium teas, if such a policy is continued it can but do further harm to the market.

Moving on to fibres, the controversy between sisal and jute for making bags continues. Of course the finest qualities of sisal are not used, No. 3 or No. 2 grades being good enough. The *Public Ledger* of Mincing Lane is among the champions for sisal, and one must watch the progress of jute v. sisal for sacks with close attention. The jute market meanwhile seems to have increased troubles to contend against; the difficulty on the Continent to get sterling being a leading one. On this side, buyers have been more in evidence and at one time values advanced 5s., closing at £15, against £16 a month ago.

Moving on to Manila hemp, receipts and stocks are reported to be 394,000 and 97,000 bales, against 574,000 and 130,675 bales last year. Prices have been sagging continuously. The slump in the shipping world does not, of course, improve matters. The Philippine shippers and dealers, report Wigglesworth & Co., Ltd., are unwilling to reduce prices, and so their quotations rule higher than those in London. Prices include J2 at £17 10s., the same as our last quotation; K is even 5s. up at £15 15s., against £15 10s. before. M1 is now £13 10s., or 5s. down, all c.i.f. With East African sisal the total volume of trade up to the end of the first week in June is considered to have been maintained, although buying has been very much on hand-to-mouth lines, the chief demand at the moment being from the Continent. On the other hand shipments from Africa have been lighter and are likely to remain so unless prices improve; Java, shut out of here by the 10 per cent. tariff, is pushing sales against both British and Mexican sisal in America, where, of course, orders for Empire Sisal are curtailed to a corresponding degree.

Yucatan (or Mexico), all the same, has been shipping much more, say, 220,000 bales from January 1 to June 4, against 118,500 last year and 116,000 bales in 1930. This must be causing great competition between sellers of the fibre outside the U.K. and must end in causing level-headed men to ask themselves which is the best policy, Protective Tariff or Restriction? In these general notes we have not space to discuss so important a subject, but in the August issue we hope to have much to say on the matter, especially as by then we shall be able to form a better opinion as to how British sisal is faring outside the U.K. or Empire in face of the pressure to sell non-British growths. Prices meanwhile gyrate around £13 5s. (seller) for British sisal No. 1, f.a.q., against £11 15s. c.i.f. for No. 2. The price of the Mexican article "good white," c.i.f. first-class European ports is put higher

than this level, but until we know of actual sales and prices we do not care to quote them.

Shellac on the spot is again lower with TN at 54s., Fine Orange 65s. to 130s., AC Garnet 60s., and RLI button 67s. 6d., against 56s., 65s. to 130s., 60s. and 70s. respectively a month ago. Palm kernels are quiet at £10 2s. 6d. per ton, c.i.f. Coming to metals, tin has been dropping rather badly during the month owing to lack of buyers and sellers pressing. The latest standard cash price is £114. This compares with £112 15s. in mid-April and £125 12s. 6d. in May. Copper is down to £27 5s., against £28 10s. before.

Coming to finance, New York has dropped her

bank rate to $2\frac{1}{2}$ per cent., whilst the other centres remain unchanged, say, Milan and Berlin 5 per cent., Paris $2\frac{1}{2}$ per cent., and the Swiss banks 2 per cent. Bar silver is quoted $16\frac{5}{8}$ d., against $16\frac{7}{8}$ d. to 17d. a month ago, whilst gold is worth rather more, $114\frac{1}{2}$ d., against $112\frac{1}{2}$ d. This makes our table work out thus:—

JUNE 25TH	1932	1931	1930
Bank rate	$2\frac{1}{2}$ per cent.	$2\frac{1}{2}$ per cent.	3 per cent.
Consols $2\frac{1}{2}$ per cent.	65s.	$60\frac{1}{2}$	$54\frac{3}{8}$
Bar silver per oz.	$16\frac{5}{8}$ d.	$13\frac{1}{2}$ d.	$19\frac{1}{2}$ d.
Exch. on New York	\$3.62 $\frac{1}{2}$	\$4.86 $\frac{1}{2}$	\$4.86

On June 30th the B. of E. rate was lowered to 2 per cent., the lowest figure since 1897 (from May to September).



THE WORLD'S COCOA MARKET.

BY THE CONTROLLING EDITOR

THE opening paragraphs of this issue refer, as is there stated, to "Studies on Cacao," by Dr. Rafaele Ciferri, the Italian authority who has already given us a book three times the size of this one but in Spanish, on the subject of cocoa generally in the Dominican Republic.

The opening paragraphs of "Studies on Cacao" tell us that "A paper on actinomycetes or ray-fungi (which causes the 'mould odour' or 'ground odour,' or, according to C. R. Fellers (Actinomyces in Milk, 1922), 'Actinomyces odour,' on dry cacao) was published in the German language (in the *Tropenpflanzer*, 1929) and later new observations were published in Italian (by Ciferri). These two papers will be briefly summarized now in order to make the series of studies more complete. In spite of the fact that arthrospores or true spores, or fragments of the mycelium of actinomycetes, are normally present on dry fermented and unfermented cacao beans, the peculiar taste is not perceptible until the full development of the ray fungi, e.g., after 52.76 hours of incubation in moist environment. The presence of the micro-organisms may be revealed also by the presence of a superficial white dust. . . . In the opinion of the writer (Ciferri) this micro-organism is passively carried from the soil to the shell of the pod by the wind and the rain . . . but the most active agents for carrying spores of actinomycetes are the men who break the shells of the cocoa pods, extract the masses of beans and isolate the seeds. If the beans are fermented, another source of contamination is the fermenting box. The actinomycetes are diffused also by the fermentation liquor and the conclusion is that they live but in an inactive form in this

liquor. Unfermented beans are poorer in the spores than the fermented ones and so are less susceptible to the mouldy taste than fermented beans. This technical moulding is, of course, very distinct from the true moulding."

It is difficult for the lay mind properly to call attention to the really useful information that Dr. Ciferri lays before us. His knowledge of languages must be wonderful, as he seems to publish these highly scientific and technical reports in Italian, German, English and Spanish with equal ease. We believe his work, if it can be brought together and published in English, would be greatly appreciated and encourage further attention to an important subject about which we are only on the fringe of knowledge and of which most of us so far know nothing at all.

Mr. Stanley Bult, of London, who was making a close study of cocoa ferments, fungi, &c., when we journeyed to Brussels together in 1910, to attend the international conference of Tropical Agronomists, wrote us at some length on the book, and although the ideas suggested may not be practical on a commercial basis, they are worth pondering over, as the impossible of to-day often becomes the possible and actual of to-morrow.

"Cocoa," he tells us, "both on the pod and on the bean, has always been subject to infestation by vegetable parasites, and this newcomer, 'Studies on Cocoa,' very learned may be and of immediate use only to cocoa scientists, serves us all to emphasize the great need for care in each of the various stages, cultivation, gathering, fermentation, drying, transport and storing. Colonies of actinomycetes, the first words in the treatise, are found on the outside

of the pods in large numbers. These (at least in theory) can be removed by nibbling and washing the pods and thus reduce to a minimum the risk of the subsequent spreading of the spores in the process of extracting the beans from the pods. But treatment should start much earlier than with the ripe pod. Preventive methods applied to the trees themselves must be used."

This treatise being a reprint from the Journal of the Department of Agriculture of Puerto Rico, is not, unfortunately, provided with a list of contents or index and this omission makes a close study of the contents rather a labour, particularly as so much specialized and detailed matter is included. The matter of course is valuable all the same, a complete explanation being presented of the many yeasts and fungi which inhabit cocoa as parasites. Culture methods and the characteristic appearance of each species of fungus are described and this information should be carefully studied by those in charge of the cocoa estates even if they do not profess to be scientists. Experiments in connection with the exposure of unfermented and fermented beans to differing conditions of temperature and humidity are described in detail with a series of graphs to simplify the summing up of the results. Unfortunately there is nothing to show that the treatise is on sale or can be procured from the Department of Agriculture, San Juan, Puerto Rico.

* * *

All our cocoa friends will be welcoming by now and perusing the contents of the second edition of "Cacao," by Dr. C. J. J. Van Hall, late Director of Agriculture in Surinam, who has had close experience of plant diseases at Buitenzorg, Java. Knowing this, many will turn at once to Chapter IX with its discussion of diseases and pests. A new chapter on selection has been added, and as cultivation methods generally have undergone important modifications since the appearance of the first edition much of the former accounts have been revised. We hope to give a preliminary to this useful "Friend" in his new out-*rig* next month, but will add here that the price is 30s. net post free from "TROPICAL LIFE."

* * *

Changing the subject one notes that whilst he is still young, if not in years, at least in ideas and the ability to keep moving and to make others do the same, Mr. Barrow Cadbury is retiring from the chairmanship of Messrs. Cadbury Bros., Ltd., and Mr. Edward Cadbury will reign in his stead. From my knowledge, direct and indirect, of both men they will still give a good account of themselves, whether at work or "at play," and we all know what the family does for its recreation. This is taken by them in many ways and always for the good of others. One member of the firm whose progress I shall follow with interest and who, I am sure, will go far, is

Mr. Paul Cadbury, son of Mr. Barrow Cadbury, who, in his turn, was the son of Richard, one of the great twin brethren, whilst the new head of the firm is the son of the other, i.e., Mr. George Cadbury. Good luck to them all, only we do wish that there were at least half a dozen firms like Messrs. Cadburys in this country, to "mop up" more raw cocoa.

* * *

We have many readers among the leading cocoa men both in Bahia and Ecuador. From the latter country came a letter per air mail, dated May 23rd, giving us various items of news. One is that on the death of Mr. Egon Martens, Mr. Arnold Panse continued the business of the Ultramares Ecuador Trading Company under the wing or with the financial assistance of the Ultramares Corporation of New York.

Comments were made on the complaints from buyers that the quality of the Guayaquil cocoa at times is not equal to the description. Thus Superior Summer Arriba, it is said, turned out to be below that standard and sometimes—a good deal below. The results have been many complaints and a tendency for those who have been caught to bid on the lowest level whatever grade or quality is tendered. We discussed by letter this unwise and somewhat dishonest practice, which even if this or that parcel got taken up with or without an allowance, the harm done to the hundred-year-old reputation of Guayaquil cocoa must be, and has been, most serious. Our correspondent discussed the matter quite openly by saying that "Business here has become rotten; bad as the state of the planters has been in the past, it has grown worse of late and promises to continue to do so, until now all we can do is 'to hang on by our chins' and trust to be able to keep our heads above water until times improve." But when will times improve? Losing heart, in the hopes of defending themselves against more and more losses, the shippers try to send their cocoa fully up to type as per contract, but the competition is so keen and the prices offered are so low, that either the shippers must cease exporting or, as some are doing, adjust the brands they ship to suit themselves and not the buyers.

One shipper, it may be remembered, in order to try and improve matters, shipped his cocoa on consignment, that is to say, he let the buyers see the cocoa before buying it, but even then there were criticisms. "Why ship on consignment such fine cocoa?" asked one. One wonders rather what the shippers in Ecuador are to do; all the same I have reason to believe that that shipper on consignment, in spite of bad times and not always fair competition, now and again, has been quite satisfied with recent results. "There is now," he told me, "a certain demand (assured demand) for selected grades of Arriba cocoa at a premium of 3s. to 4s. per 50 kilos, and both

dealers and manufacturers are buying our cocoa." This fact proved what a pity it is that we cannot get all dealers to work to one common agreed standard, whether for choice cocoa or lower grades.

Our B. of T. Returns for May.

One is glad to see an increase in our deliveries for Home Consumption during May of 455 tons, making the total for the five months work out at 3,158 tons above last year. If we can only keep this advance going to the end of the year all will be well.

During May we imported 48,925 tons, of which 48,047 came from B.W.A., while last year our imports were 1,078 tons more at 50,003 tons, of which West Africa sent 48,925 tons, whilst with Home Consumption the deliveries were 3,234 tons, against 2,779 tons last year and 5,711 tons in May, 1930. This makes the three years' totals compare as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY—MAY.					
RAW COCOA ONLY	LANDED	INCL. B.W.A.	DEE'D. H.C.	EXPORT	STOCK MAY, 1931
JAN.-MAY	TONS	TONS	TONS	TONS	TONS
1930	43,468	42,641	23,244	917	49,850
1931	50,003	48,722	28,600	1,832	47,500
1932	48,925	48,047	31,758	1,232	44,850

Dec. 1,078 Dec. 675 Inc. 3,158 Dec. 600 Dec. 2,650

Prices and Quotations.

Our chief buyer is said to have gathered in about 1,000 bags of the best Granadas at 38s., and this seems to have made some people hopeful of getting 39s., but, on the other hand, reports speak of pressure to sell other growths competing with Grenadas as well as those which run rather higher in values. Really good Trinidads are said to have been bought, spot, at 40s., against 37s. 6d. c. and f., but a fine mark sold at 52s., which can be said to have pulled things up a bit. Good Accras on the spot are still quoted 28s. or 28s. 6d., against 27s. for fair, with Bahias at 36s., against 28s. c. and f. Summer Arriba Guayaquil is put at 60s. to 65s. spot, against 52s. 6d. c. and f.

Messrs. Wildberger and Co., of Bahia, have been good enough to send us the following table showing the total of their crop, according to the receipts. The months are, as usual, May-April:—

CROP, 1931/32	BAGS
Iheos	942,280
Cannaveiras	130,100
Belmonte	129,149
Rio Contas	130,035
Jequie	78,555
Santarem	38,844
P. Seguro	4,242
Others	52,105

Total 1,505,310 BAGS.

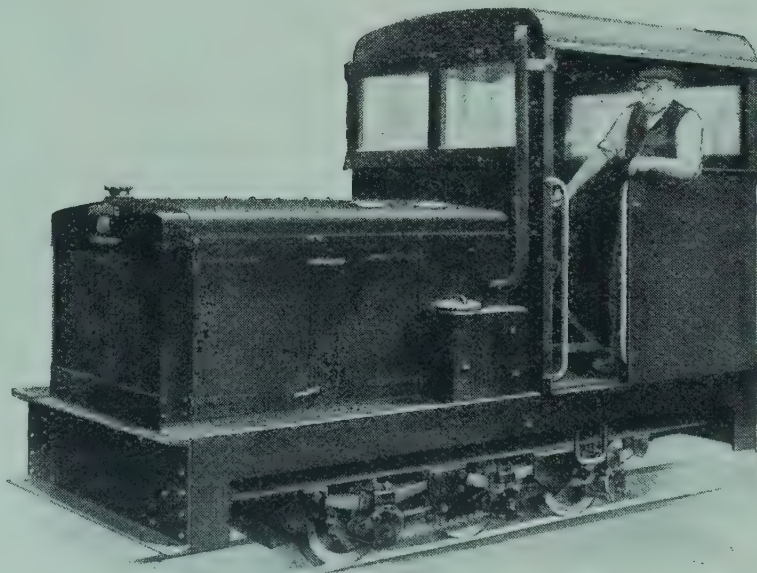
PETROL LOCOMOTIVES

SIMPLEX

DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ „
20/35	4 „
40/50	6 „
40/50	8 „
40/50	10 „



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ „
20	2½ „
20	4 „
27	5 „
50/70	10 „

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and Extend the Consumption of Tropical Products.

28th YEAR. No. 326.

AUGUST, 1932.

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IN TOUCH WITH EVENTS

May we start this month's issue by calling our readers' attention to p. 145, where we start the first of what we hope will prove to be a fairly long series of articles on "Vegetable and Other Oils" competing with them. As we have not yet had time fully to outline the series, especially in connection with marine oils, whale oil in particular, the present article has been headed "Palm Oil," and that name is likely to "stick" for some little time, although we hope to get well into coconut oil before very long and then pass on to others.

* * *

The British Red Cross Society will hold a course of seven lectures and demonstrations on Tropical Hygiene on Mondays, Wednesdays and Fridays, commencing on Monday, September 26th, at 9, Chesham Street, Belgrave Square, S.W.1, at 5.30 p.m. They will be open to non-members of the British Red Cross Society. The examination for the British Red Cross Society's certificate in Tropical Hygiene will be held on October 14th.

Fees for the course are 5s. for members of the Red Cross Society, and 7s. 6d. for non-members.

The Philippine Agriculturist for June (published by the College of Agriculture, out there) has a very good article, illustrated, on goat raising. One illustration shows an Anglo-Nubian grade of doe, whose last milking period gave 166 litres in 241 days; another shows a proper method for killing a goat. The animal is laid on its side with the man's right knee on its shoulder whilst his left hand appears to be holding the animal firmly about the nose and mouth. In his right hand he has a long knife which is quickly thrust through a point at the back of the lower jaw with the blade directed towards the ventral side of the animal so that at one stroke the blood-vessels and tissues are cut, causing instant death.

* * *

At the Annual Meeting of the West African section of the London Chamber of Commerce, which took place on July 14th, Sir Edgar Sanders and Mr. David Jones were respectively re-elected chairman and deputy chairman of the section and thanked for their help and attention in connection with the work carried through during the past twelve months.

Solario, the well-known racehorse, has beaten all records in the price he realized at public auction on July 11th. Following a bid of 46,500 guineas made by the representative of an American syndicate, Lord Glanely, on behalf of an English group, secured the horse at the cost of 47,000 gns., i.e., £49,350.

* * *

Correspondents in the *Morning Post* have been claiming that the habit of drinking tea, especially at "5 o'clock," originated in France and, among other writers, Mdme de Sévigné is quoted to prove this. "A Student of the Drama," however, challenges this and seeks to prove by quoting a play, "The Wive's Excuse," by Southerne, that formal teas were established in England before 1692.

* * *

Speaking at the twenty-eighth annual general meeting of Estates Control Ltd. (a relative of Bovril Ltd.) Lord Luke claimed that "whatever other Argentine product, be it mutton or frozen beef, exported to England may be curtailed, I do not anticipate much further reduction in chilled beef. Chilled beef is a type of baby beef that it has taken forty years of pedigree stock farming to produce. This type of steer matures on alfalfa—that is lucerne—in under two years, and the type could only be duplicated with similar soil and climate after many years of importing British pedigree stock, and to get numbers of the new type would mean many generations of three years each."

* * *

The Journal of the Tea Research Institute of Ceylon, generally known as *The Tea Quarterly*, has come our way again and turns out to be dated May, Vol. V, Part II. It is issued from the Tea Research Institute at St. Coombs, Talawakelle, Ceylon, and edited by Dr. Roland V. Norris, D.Sc., F.I.C., the Director of the Institute. Like all other commodities tea has its "moisture" troubles, and two articles by Mr. D. I. Evans discuss the matter, whilst a note in the Editorial tells us that arrangements have been made with Messrs. Baird and Tatlock, Ltd., of 14/17, Cross Street, Hatton Garden, London, E.C. 1, for a supply of the suitable apparatus—costing £6 8s. 9d. (in London), for the determination of moisture in tea. Mr. Evans also writes on "Suction Dryers" (p. 69).

We have had quite a boom in orders for books as advertised in our pages, or in enquiries concerning others not mentioned there. Quite a lengthy order came from the West Indies, whilst three inquiries were received for books on South America, one, if not two, of the letters expressing the hope that we had an up-to-date book on tobacco planting, which, alas, we have not got. Who will supply one? We can offer generous terms, especially if the information turns out to be up-to-date, reliable and generous on its side. Vegetable oils and tea are also on the lists, the tea enquiries being from Kenya and East Africa, whilst Fernando Po is after coconuts and the "Fermentation of Cacao." Orders for the Sisal book are looking up, whilst the "Rubber Industry of the Amazon" and "Green Manures" are also having a fair share of attention.

* * *

An enquiry from Ireland asks for quotations and particulars of apparatus to secure water without sinking a well, an apparatus similar to that used in India with success. The desired information has been supplied. "I find no such firms advertising in your paper," writes our subscriber. To this we made reply, "We have, more than once, asked firms who specialize in well-sinking apparatus to advertise in our pages because, of course, we circulate regularly in Trinidad, Venezuela, &c., where boring, &c., is needed for oil on a big scale, so large that, having found the oil, the well is closed down until wanted. With petrol in this country paying a tax of 8d. per gallon irrespective of quality and value, the marvel is that the industry is as good as it is over here, where money, if tight, is not so scarce as elsewhere, so that given petrol at a reasonable cost, a much bigger trade would accrue and more apparatus be needed.

* * *

Those who know the Thames at its best know Sonning, near Reading. This spot it appears has been the habitation of people for 6,000 years and how much more as evidenced by the prehistoric finds in the neighbourhood. The skull of a woman dredged from the river bed shows, it is claimed, that people were living on the banks of the river about 4,000 B.C. Relics of a great fight between an aurochs or wild ox and a huge red deer also were dredged up, showing that, with horns interlocked, the two animals fell into the water and were drowned. When their bones were recovered, the horns were still fast locked. An interesting find was a hoard of Roman coins covering the reigns of fifteen Roman Emperors.

* * *

Discussing with a friend the notes before us when writing the article on p. 149 on "Petrol from Coal and Coal Products," he told us that among the chief of the processes mentioned in the

concluding lines as being likely to pump new life into the coal industry is the hydrogenation of coal for the purpose of extracting petrol.

From low temperature carbonization the principal product is a smokeless semi-coke to the amount of from 55 to 75 per cent. of the coal treated. From the residue is obtained about three gallons of high-class petrol and a quantity of pitch per ton of coal. The pitch, when subjected to hydrogenation, produces another seventeen gallons of petrol and six gallons of heavy oil suitable for Diesel engines.

According to such reports as have come our way (and, to be honest, which seem clear enough to our untutored minds to be made use of), tests carried out by experts have produced by hydrogenation 120 gallons of very high grade petrol from a ton of coal. It is believed, however, that the latest tests will realize 150 gallons, especially as the chemists of the Imperial Chemical Industries are said to have brought the figure up to 165 gallons per ton of coal. Again, researchers further hope that ultimately the yield of petrol may mount up to anything between 250 to 300 gallons of petrol per ton of coal. Will those possessing at present unremunerative deposits of coal please note this?

* * *

Many of us, perhaps most of us, find it difficult to believe anything they hear from Russia when the source of information is a Soviet one. All the same, unprejudiced men, independent and indifferent to what Russia is doing and how she is doing it, claim that progress is being made, with the result that with her huge population she is likely to influence the world at large in time and to drag wages and standards of living to their low level unless the other countries have the wisdom to shut out Russian products by a high tariff wall. This country has been encouraging the opposite policy, especially with lumber. "During the last five years," reported Major Colville, Secretary of the Overseas Trade Department, "this country imported £135,500,000 from the Soviet Union and exported to them, during the same period, about £25,000,000, or less than one-fifth. Furthermore, whilst we always paid cash, our goods were sold almost entirely on credit.

* * *

Discussing the machinery used in Bulletin No. 7, Mr. Evans writes, "It is not suggested that the results represent the ideal conditions of tea manufacture and it is hoped that they will convey to the reader some idea of the way in which successful manufacture has been carried out at St. Coombs and illustrate how the collection of such data can be of service in the investigation of tea manufacture. It would be a great help to the Institute if similar data could be collected from other estates in different districts in the Island and *I should be very grateful to receive such figures when it is possible to send them.*"

Is all the cutting done downwards from the higher leaves? If so, is there not some difficulty to get the knife in between the leaves at the start? It was our fixed impression that the leaves were cut upwards from below and then split or withered leaves (if any) were discarded until the good leaves only remained. What we would now like to see would be up-to-date films of sisal gathering and preparation for market first in Yucatan and then in East Africa. Can such films be arranged for?

* * *

By air mail, delivered on July 11th, we learnt with the greatest regret of the death of Señor Rafael A. Peón, whose name has been prominent in our sisal section for some months. Señor Julio Rendon, writing on June 27th, spoke of his friend as having been treacherously murdered on June 18th, when at his small estate or hacienda Santa Inés, about seventy miles from Merida. The villain in this tragedy in real life was an ex-manager who had been in his employ for many years, and later accounts speak of as many as nine others having been killed as well. This points to a gun of some sort being used, and looks as if the servants, hearing the noise, had run to see what was the matter only to get killed in their turn. Señor Peón was only 43 years of age, and leaves not only a widow and three children, a boy and two girls, but also a mother and two sisters, to all of whom we asked Señor Rendon to extend our regrets and sympathies. The sudden loss of so leading a member of the banking and economic world in Merida will take time to fill, and all who knew him assure us that Rafael Peón was liked and looked up to by everyone. His many letters to us fully justify such a claim.

East Africa in London.

1931 Their Busy Year.

Those who have been, as we have on many occasions, in and out of the offices of H.M. East African Dependencies, opposite Trafalgar Square (at Royal Mail House), often worrying Major Dale, Major J. Corbet-Ward and others to a degree that would have justified some show of impatience but never did, must now be reading the Report of the work done by them during 1931, as drawn up by the Deputy-Commissioner, Major C. H. Dale, O.B.E. At times the reader must be struck at the immense amount of work that gentleman gets through in the course of the twelve months, especially when you have had practical experience of his "drive" and knowledge of the subject discussed when you are present at any meeting with him.

Major Corbet-Ward is also a tower of strength to East Africa, especially through the work he puts in at the exhibitions and shows which he attends when East Africa is exhibiting. There is a genial forcefulness in his persuasive manner and tongue that must have landed many a useful settler with

the necessary capital, "snick" into the middle of some fertile spot in East Africa to make good, or on the other hand, caused more enquiries and orders to come their way after a careful examination of the prices, qualities, &c., of the sisal, coffee, &c., on show. Then there is Mr. McHardy; what a willing help he was to us when we had to draw up an abbreviated map, to occupy some six inches, showing the railway route from Mombasa to somewhere near Trans-Nzoia; what mistakes would have been made but for him.

Taking the Report itself, we hope to quote from it, especially in connection with sisal, in our next issue. Wherever you are, if you even "touch" fibres, tobacco, coffee, cotton, &c., write to Royal Mail House, Charing Cross, or, better still, call in there if passing, and ask if they have a spare copy for you. When you get it probably you will agree with us on one point, quite an important one, if East Africa is to expand its trade and influence. On pp. 26-27 you will find a list of those papers in which the dependencies have been advertised, and TROPICAL LIFE is NOT among them. How can trade expand if those anxious to push it only strive to convert the already converted. This journal goes every month to many people, with money, who want a change. Floods, labour troubles, questions of health, &c., are urging them to move, but where to go? How can they be sure that in moving they will not be jumping from the frying-pan into the fire? Advertise in TROPICAL LIFE and tell them of East Africa and what a heaven is there.

* * *

Those who, like ourselves, carefully studied tropical agriculture on the spot in 1889/90 and became personally acquainted with the names and often with the owners of the names of those in charge in those days, cannot but be interested in the article that Mr. W. G. Freeman (formerly Director of Agriculture in Trinidad and now back at the Imperial Institute) contributed to "The Colonial Services Club" Magazine on "Tropical Agriculture Then and Now." He takes you back to the beginning of Agricultural Departments and of Directors of Agriculture in a most instructive manner. One renewed acquaintance with Dr. Trimen in Ceylon in 1896, Dr. Massee at Kew, Dr. C. A. Barber when at the Leeward Islands, Dr. Maxwell Lefroy at Barbados and of Mr. E. E. Green, the tea planter who, in 1899, was appointed Government Entomologist in Ceylon, who we knew as a reliable authority on bird-life, especially parrots; he divided birds into two sections, i.e., those useful and those harmful to crops and plants; some were of course half and half, sometimes doing more harm than good or vice versa. So the story runs on, but not in this journal; there must be many, however, who will be as pleased to read what Mr. Freeman has to tell them in the original as we were, and in their case we hope that they will have the luck to meet with the article.

Dollar Diplomacy.

The Blight of Latin America.

WE are reproducing the following important review exactly as it appeared in the *London Morning Post* of May 20th, since it coincides so exactly with our sentiments on the various aspects of the main subject discussed, viz., the efforts, forceful, sentimental, or financial, that the United States have for long been making to peacefully penetrate Latin America and foist her ideals and opinions on these Latin people who are more different to the northerners than the dwellers in the East are to us in the West. East may be East and West may be West, but they will meet and fraternise long before the hustling, loud-voiced traders of the U.S.A. will even "approach" their quieter but not less persevering neighbours down South. As things are to-day, the writer of this review—one wonders if it was Mr. Cunninghame Graham or Professor F. A. Fitzpatrick?—rings true when he concludes by saying that Dollar Diplomacy and the policies behind it, need only time to breed widespread hatred between the Southern and Northern States, for of course it has already done so in many cases.

"*The Looting of Nicaragua.* By Rafael de Nogales. Illustrated. Wright and Brown. 15s. net.

"General Rafael de Nogales is a soldier of fortune who would have been happily at home on the resounding highways of Seventeenth Century history. His 'Memoirs' is one of the immortal pieces of manly-adventurous literature, and it leaves you amazed that any human being could live through a single chapter of it. Wherever there is a spot of 'trouble' anywhere in this world so wide, it is long odds that the author will be there—and an absolute certainty that he will be fighting on the weaker side, for he has the romantic sense of justice which is more often met with in historical novels than in history itself.

"Hearing of the Nicaraguan imbroglio he made up his mind to study it as an eye-witness and find out who was to blame. He soon discovered that the true villain in the blood-stained melodrama was 'Dollar Diplomacy,' and his verdict has been endorsed by public opinion in all the Latin-American States, great and small. Washington poses before European observers as a pillar of world-pacifism; and one of the chief Yankee arguments against the cancellation of war debts is the assertion (a popular electioneering cry!) that Europe would spend the money thus saved on the increase of armaments which might even be used against Uncle Sam.

Monroe Monopoly.

"Throughout Latin America, however, the 'United States of the North' are regarded as a

predatory Power, which aims at swallowing up Mexico and the small central American Republics, Nicaragua being marked down as the first victim. Panama's unhappy lot is to be hers on the plea that the future increase of interoceanic traffic will necessitate the building of a second canal through Nicaraguan territory. That is the unconfessed reason why the Diaz Government has been financed by Wall Street and reinforced by U.S. Marines and war-planes, though, if there was any freedom of choice, the Constitutionalist cause would be openly supported by the vast majority of the people of Nicaragua.

"General de Nogales, who once more enjoyed his usual 'iron ration' of narrow escapes from detachments of the Diaz armies, sent to cut him off (in both senses of the term), and from the diseases of the jaguar-infested jungle (to say nothing of his unsuccessful effort to climb the dangerous Monte Musun, with its legendary crystal lake and golden alligator), makes it quite clear that foreign intervention is responsible for the ruin of the country. Washington, by the obvious application of the legal maxim, *qui facit per alios facit per se*, must be blamed for starting the civil warfare which has made of Nicaragua 'a cemetery ruled by a swarm of buzzards.' Women are employed in the fighting-line, which recalls the horrors of the wars of Lopez the Dictator in Paraguay. The Constitutionalist leader, Augusto Sandino, who retreated to the hills and kept up the struggle, may not be quite the patriotic paladin he appears in this author's vivid narrative. But he has right on his side, and, without the help of foreign money and troops, the existing administration, or, rather, maladministration, would not survive for a day.

Northern United States.

"Writing as a Venezuelan, General de Nogales insists that the Monroe Doctrine is, from the Latin-American point of view, a charter of spoliation for the 'United States of the North.' It gives them a sort of monopoly, debarring European Powers from helping in the defence of countries in which, to put it on the lowest basis, they have a much larger investment than the Wall Street financiers. The Nicaraguan scandal, following that of Panama, has shown that the forces of the Northern plutocracy threaten the welfare of all the States to the South, who feel themselves marked for dissolution in detail. 'I do not consider it right or necessary,' he declares, 'that North and Latin Americans should continue to live like dogs and cats for the sake of a few financiers who, by keeping the American public in ignorance of what is really going on here (in Nicaragua) are driving things to an extreme. The end will be an incurable hatred, and perhaps the ruination of the two-billion-dollar trade between the United States and over twenty Latin-American Republics.' Already this trade is falling off."

PALM OIL. PART I.

Prices poor, but Interest growing.

Survey of Vegetable Oilseeds and Oils. Vol. I.

PALM OIL PRODUCTS. Pp. 130, with a map, many tables and an analytical and price chart, two illustrations, being E.M.B. 54, issued by the Empire Marketing Board, dated June, 1932. Price 1s. net. Postage 4d.

This Bulletin is divided into four parts. Part I discusses producing centres of palm kernels and palm kernel oils, and also consuming countries. Part II does the same for palm oil. Chapter III discusses prices and Chapter IV consists of a Summary and Conclusion. The last paragraph of the conclusion is worth remembering, especially by those who still insist on holding up and keeping back the prosperity and well-being of the indigenous palm-oil centres in British West Africa, because in biblical if not in pre-biblical times the land was said to belong to the natives who during these hundred and thousands of years have done nothing to raise themselves, and will never advance until modern conditions are introduced into their midst by the white race and then only to a limited degree. The paragraph, or rather the last two paragraphs, do not tell us however when and how improved methods of cultivation and harvesting, also one takes it for the preparation of the products for markets, are to be introduced into the older areas in West Africa. Our idea is that the mistaken ideas of dominating influences of yesterday and to-day are determined to do all they can to keep back Nigeria, the Gold Coast, &c., by refusing to allow the land to be granted to would-be factory owners so that up-to-date methods can be introduced and safeguarded and thus enable these old-time centres to compete against the Belgian Congo, British Malaya, the Dutch East Indies, &c. This is what they say:—

"The cultivation of the oil-palm will no doubt continue to expand steadily as the new areas in British Malaya and the Dutch East Indies are brought into full bearing and as improved methods of cultivation and harvesting materialize in the older areas in West and Central Africa. The future supplies of oil-palm fruit are therefore assured and the outlook for the industry will depend mainly upon the growth of demand for palm-kernel oil and palm-oil. The demand for these products in turn mainly depends on the one hand on the growth of the soap and candle, and of the margarine and other edible fat industries and, on the other hand, on the competition of other vegetable oils and fats as well as animal and marine fats utilized in these industries.

"The expansion of these industries, more particularly that of soap, should continue with the general increase in population and with the continued rise in the standard of living. As regards the substitution of one fat for another in these

industries, the prospects are not so easy to define. Substitution is primarily dependent upon the special properties which the competing fats possess and with the widened uses for inferior oils brought about by improvements in technical processes. But price considerations also play an important part and over a relatively short period the price factor is probably the more potent. In this connection the efforts that are being made to improve the productivity of the oil-palms and to increase the oil content of the fruit should result in a lowering of the cost of the product, while the increasing importance of factory production which now accounts for about 25 per cent. of the volume of palm-oil entering world trade as compared with less than 5 per cent. in 1920, should also tend in the same direction. It remains to be seen, however, whether the reduction (in cost) will be sufficient to permit of more effective competition with other oils and fats such as coconut, groundnut, cottonseed and whale-oils which are the principal oils entering into competition with the products of the oil-palm."

The words "increasing importance of factory production" should put British West Africa on its hind legs and anxious to be ready and up-to-date at less cost than any other centre. Probably however nothing will be done and these fine areas will continue to stagnate and play a smaller and smaller part in the trade of the world because (unlike this country where everything nice is being built over) nothing in these areas with regard to the tenure of land is to be brought up to date.

It is certain that everyone interested in vegetable oils, animal fats and marine oils will be studying this report carefully. It has more in it that drives facts home to one than is the case with similar publications, and so producers, the engineers feeding the factories of the producers on the one hand, or of those making up the oils into soap, margarine, &c., &c. on the other, as well as the merchants and others, will be glad to read what the report has to tell us. "Production statistics," are the concluding words of the Foreword, "except in the newer producing areas, are almost entirely absent."

Marked attention is deservedly called, more than once, to the Report on the Oil Palm Industry in British West Africa by Mr. F. M. Dyke, the technical officer of the Niger Company, Ltd., drawn up in 1927 (see TROPICAL LIFE, March, 1928, page 27), and to the useful articles that have appeared and are still appearing in the *Malayan Agricultural Journal*, to which we shall also be referring in future articles, and here let us congratulate the Department of Agriculture at Malaya on the results of their investigations.

(To be continued.)

The Macgregor Laird Centenary Celebrations.

The Prince of Wales at the West African Dinner.

ALMOST, if not quite, 450 guests must have sat down to the dinner at the Savoy Hotel arranged by the Nigeria and Gold Coast Dinner Clubs in connection with the Macgregor Laird Centenary. Mr. Winston Churchill, M.P., presided and the Prince of Wales honoured the gathering with his presence. Of course everyone in England at the time to do with West Africa was there, including Mrs. Winston Churchill and Mr. Randolph Churchill, Sir Cecil Armitage, Mr. J. H. Batty, Sir Hesketh Bell, Mr. E. Hyslop Bell, Colonel and Mrs. Beddington, Earl Buxton, Mr. and Mrs. A. C. Cartwright, Sir John and Lady Caulcutt, Mr. and Mrs. d'Arcy Cooper, Sir William Gowers, Major-General and Mrs. W. H. Grey, Mr. Picton Jones, Mr. and Mrs. Anton Jurgens, Lord and Lady Leverhulme, Lord Lugard, Sir Edgar and Lady Sanders, Sir Ransford and Lady Slater, Lord Selborne, &c., &c.

Speaking of the Centenary of Macgregor Laird's expedition to the mouth of the Niger, the Prince of Wales said: "It is certainly an historic anniversary in the history of the West Coast, for Laird's courageous expedition to the mouth of the River Niger marks a definite step in the real development of West Africa. He was not the first one in the field, but he realized, perhaps better than anyone before, the possibilities of opening up the Niger delta to trade, and he was convinced that the establishment of legitimate commerce with the interior was the only means of counter-acting, and eventually abolishing, the Slave Trade.

"After his first two expeditions, and until his death, he devoted himself to furthering trade with West Africa, and was responsible for the establishment of a regular monthly steamship service between this country and various ports on the Coast.

"He lived and died with high ideals; his dealings with the natives were invariably fair, and he and his fellow pioneers did much to make possible the future progress and development which British administration has been able to achieve in the interests and for the welfare of the inhabitants of West Africa."

The Leprosy Review for July, the quarterly organ of The British Empire Leprosy Relief Association, discusses leprosy on the Gold Coast and in the Argentine, the treatment of leprosy by intradermal infiltration, the duties of a nursing superintendent, and other matters of interest both to those working to soften the lot of the lepers, as well as the patients themselves. Price 2s., from 26, Dorset Square, London, N.W.1.

Here and There.

The Bicentenary of George Washington.

There was a mighty gathering of The Pilgrims of Great Britain at the Hotel Victoria on the evening of July 12th, to commemorate the bicentenary of the birth of George Washington. In the absence of the Duke of Connaught, president of The Pilgrims, Lord Derby presided, and among the guests were Mr. Mellon, the American Ambassador, and Dr. Murray Butler, the president of the American Pilgrims. The Duke of Connaught, unable to be present, sent a letter that was enthusiastically received by all, but especially by the Americans present. After expressing his pleasure that such a gathering had been arranged, H.R.H. went on to say:—

"The Pilgrims of Great Britain have so long worked in association with their brethren in the United States, in the common cause of good fellowship, that the presence to-night of Dr. Murray Butler, the president of the American Pilgrims, gives me the opportunity, as president of the British Society, of extending to him a warm welcome, both on behalf of the Pilgrims and of that large British public who know of his distinguished services to his university and to his country. I understand that this year Dr. Butler celebrates his seventieth birthday, his fiftieth year of graduation at Columbia University, and the thirtieth year of his office as president of that great institution. I am sure that I am expressing the wishes of all present at the dinner to-night in cordially congratulating Dr. Butler on these three important landmarks in a great career."

Mr. Winston Churchill, M.P., made *the* speech of the evening on "The Memory of George Washington," and Dr. Murray Butler replied. Among the list of those present we noticed the name of Mr. Randolph Churchill, the son of Mr. Winston. It must have been a pleasant evening in every way.

Dr. Edwin B. Copeland, an old time "Friend" of this journal, founder and first Dean of the College of Agriculture at Los Baños, returned (on leave from the University of California) to the Philippines as Agricultural Adviser in the Bureau of Plant Industry. The College went *en fête* at his arrival. First there was a luncheon at which eighteen old-timers were guests. Later those of "Copeland's time" and others offered him a welcoming dinner at which a hundred and more sat down, some with experience of the College and its work away back to the start in 1909. Dr. Copeland was found to have changed but little; perhaps a few more white flakes in his hair since 1917, when he left, we believe, to encourage and push on the cultivation of rice in the Mississippi Valley during the war. Altogether the College and the Campus had a good time and by now the students are working more diligently than ever with the first Dean in their midst again. These festivities must have been

taking place about the time that the third edition of Dr. Copeland's book "The Coconut," made its appearance in London, through the firm of Macmillan; see our two reviews in the February and March issues.

Like many people, even if they do not go near the river from year's end to year's end, we have always been genuinely interested in the annual regatta at Henley, most of all in the Diamond Sculls. At one time, away back to Guy Nickals' day, we could name the winners and leading competitors for long spells, and how Ooms the Dutchman put his sculls right back along his boat, but that is all passed. Now, for the first time in history a German has won the Diamonds, won it too against a fellow German as his chief opponent. Where the English element comes in lies in the fact that both the visitors are reported to be members of the Berliner Ruder Club and had been trained by Tom Sullivan, the old professional. In the various heats Buhtz had won easily and in the final he left his fellow clubman, Boetzelen, with ease, taking nine minutes fifteen seconds to cover the course. Life must have been merry for a spell in Berlin when Buhtz and Boetzelen returned to the bosom of their Club, for no one can claim that Germany has changed to a sufficient extent for such a return to be otherwise.

The Indian Census for 1931.

IN face of the racial or religious riots in India, the paper read by Dr. J. H. Hutton, C.I.E., D.Sc., Director of the 1931 Indian census before the Indian Section of the Royal Society of Arts on June 3rd, is timely. Starting at the end of the story it seems that the probable (when you read the entire paper, you will understand why that word probable is introduced) population in 1931 amounted to 352,837,778 people, against 318,942,480 in 1921. Divided into religious communities, the present returns work out as under:—

Hindu	239,193,635	Tribal	8,391,065
Muslim	77,677,545	Christian	6,296,763
Sikh	4,335,771	Zoroastrian	111,853
Jain	1,252,105	Jew	24,141
Buddhist	12,786,806	Others	459,873

In the Punjab, we were told, where political rivalries were running very high, a very natural desire on the part of each community that it should poll its full strength in the country's population, led to an enthusiasm which was not only inconvenient, but tended towards inaccurate results. So high did feeling run in the Punjab that in one case murder resulted from a dispute as to whether a certain individual should be recorded as a Sikh or as an Ad-Dharmi, a new religious label invented by the depressed classes who did not wish to appear as Hindu, and meaning "The Original Religion," whatever that may be.

The actual taking of the census itself followed very much the usual course of a census in India

and was attended by the usual census incidents, of the kind that will be familiar to any member of the Society who has worked in that country, from the inevitable tiger in the Central Provinces who sprang on to the car of a Deputy Commissioner doing his round on census night to Bhils who objected to their houses having numbers put on them at all, and to the tragic case of a Burman who hung himself because an undiscerning enumerator insisted on numbering his house 13.

Well over two thousand Fellows and their friends gathered around the Council of the Royal Empire Society on June 23rd, at the Annual Reception which was again held at the Imperial Institute. Among other attractions was a concert as well as a dance, and both proved very popular. The Exhibition Pavilion certainly is most suitable for the large numbers who were dancing.

On July 11 the Royal Empire Society was again busy, for Chairman and Council gave an "At Home" in honour of Sir Granville and Lady Ryrie before their departure for Australia. There was a full attendance, with, perhaps, ladies in the majority.

"I have been much interested in reading the comments made at the Annual Dinner of the Cocoa Association of London, by the shining lights of the cocoa world on this side, especially with regard to the need of formulating some scheme for increasing the consumption of cocoa. I am not interested in sisal, but outside of that section I found the contents of your June issue instructive and interesting."—Extract from a letter addressed to our Editor from a cocoa planter in Grenada, resident over here.

Father James R. Cox, Roman Catholic priest and a former miner, is a candidate for the Presidency of the United States. He claims to be sure of the votes of America's 17,000,000 unemployed plus those of 7,000,000 ex-Service men and their families, and that 75 per cent. of his supporters are non-Catholics. As leader of the Washington hunger-strikers and as parish priest of Pittsburgh he may constitute a serious factor for President Hoover. Were such a man to become President of America one wonders if it would still be necessary to publish paragraphs like the following from Reuter:—

"Over-enthusiasm" by the police in their use of "third degree" methods against a man suspected of assault and robbery is alleged by the district attorney to have been the cause of the man's death.

The district attorney has ordered an inquiry by the Supreme Court. The suspect was a young man of 20 named Hyman Stark. For eight hours on Friday last he underwent a gruelling questioning by the police. Later he died, and a post-mortem examination is alleged to have revealed a fracture of the larynx, cerebral hæmorrhage, and bruises on the body.

THE WORLD OF CACAO.

OUR readers must own that the special articles which we have published on Cacao as a raw material, or Cocoa as the manufactured article, have indeed been few and far between. This month, however, so much has come upon us suddenly that has to do with this important crop and industry that we have no choice but to devote one if not two articles to the subject, one which is always first in our minds.

Leaving the second edition of Dr. Van Hall's book on *Cacao* (to which we devoted a short paragraph in the cocoa report of our July issue) for the end of the story, we will first discuss *The Twenty-Second Report of the Imperial Economic Committee*, dealing with "Cocoa,"¹ price 6d. net, of H.M. Stationery Office, at Adastral House, Kingsway, London, W.C. and elsewhere, 91 pp.

Those who wish to build up or increase the manufactured cocoa industry in their own country, will find much to learn from this Report which shows how our consumption has been built up from 430 tons in 1830, to 50,900 tons in 1931, whilst up-to-date tables are included at the end dealing with the movements, stocks, &c., of cocoa and cocoa-butter. The use of talking films is strongly recommended to facilitate the teaching of up-to-date methods for the better cultivation of the estates and preparation of the cocoa to the small owners, especially the natives in West Africa.

Cocoa producers will be interested in what the Report has to say concerning the use of genuine cocoa-butter as against substitutes, and so far as we read the summing up, the substitution of other fats for genuine cocoa-butter should be discontinued. Precautions are also called for to enable consumers to be certain of buying powder and plain chocolate with their full nutritive value and through that, to make producers feel that everything is being done to render the finished article as genuine, nutritive and acceptable to the public as possible. Of course, by using genuine cocoa-butter only, the sale of the raw material would be pushed to its uttermost.

(See also pp. 159-160.)

THE CACAO INDUSTRY OF TRINIDAD, in four parts, of 8 pages each, by Professor C. Y. Shephard, reprinted from *Tropical Agriculture*, being the organ of the Imperial College of Agriculture, Trinidad. No price mentioned.

The sub-headings to these useful articles and reports tell us that:—

Part I deals with the scope of the investigations as a whole.

Part II is a general history of the production and consumption of cacao.

Part III. The History of the Industry up to 1870.

Part IV. The History of the Industry from 1870-1920.

There is, needless to say, much in these four reports to take note of and act upon, more particularly when appeals are made for reasonable changes in, or additions to, prevailing returns, and yet nothing is done and the returns remain unaltered. Take the question of collecting reliable data, how necessary such returns are. It is quite possible when complete, up-to-date figures are obtainable, with a table showing roughly what cacao, irrespective of growth, can be truthfully described as "good," and what proportion should be thrown out as non-beneficial to the reputation of the industry if used, that we should find the situation not so hopeless as it has appeared to be of late. If cacao-butter substitutes ever are disallowed then, quite justifiably, all parcels in which too many beans are below par, should be penalised and not passed, using the American standard as a guide until a more suitable one is forthcoming. One cannot help feeling that, if only "decent" cacao were used, and there is ample of such grades that can pass this useful term, the popularity and therefore the sales of cocoa products would increase on all sides. Can it not be argued that a big cause of the industry getting more and more into the hands of the very big concerns may be due to the fact that they use only "decent" cacao and the Public, without knowing anything about cacao realize that what they buy from such firms is always reliable, even and "decent." Thus the Public stick to them, grumbling, probably, all the time at the cost of the finished article compared with the published prices paid for the raw materials, sugar and cacao, but they stick to the best-known firms all the same.

One section of the inspection work carried out to obtain reliable information and to establish detailed, standard comparative costs, entailed 216 estates being visited and their returns, &c., inspected and checked to secure the desired information. These estates represented nearly 50,000 acres, producing over 74,000 bags or about one-fourth of the total output of the island. Statistics based on such knowledge can therefore be looked upon as facts, not merely estimates. When can we look for such returns from all the centres? Until we do, the producing industry generally cannot complain if things do not mend with them as quickly as they consider they ought to. Fate helps those that help themselves and who assist Fate to help them. Trinidad is doing all it can to assist Fate, but what other centres are doing the same?

These remarks have been called into being by perusing the first only of the four reports. It is

¹ We have adopted this spelling for the Report as it is used throughout that publication.

easy, therefore, to realize what a lot can be learned from studying the four, especially where the everlasting struggle to secure adequate labour supplies is discussed as outlined throughout Part III, or the account of the rise in importance of the cocoa industry over sugar, and the struggles—as to-day—of both to keep going, see Parts III and IV.

* * *

Whilst we were writing last month of the need, both for fairness as well as for reasons of humanity for Labour in this country to cut costs—they call it lower the Standard of Living—in order that all may have an equal portion of the loaves available instead of some having whole loaves and others no bread, the Government of this country were, very thoroughly, putting that theory into stern practice with those who had saved some money. As usual, however, it is at the expense of those who save their money and, in this case, who used it to help their country and Government in times of need, who are now called upon to give up part of their loaf so that others who have not helped to float and maintain the loan shall not be called upon to pay what the Government in their name promised to pay for the loan of the money in the past. Instead of receiving 5 per cent., which made the loan worth up to 110, now the subscribers are to receive $3\frac{1}{2}$ per cent. only in place of the 5 per cent. as promised in the first place. As a result, whilst this loan is falling in value, every other first-class Government Stock, still able to pay something above $3\frac{1}{2}$ per cent., has been bought up at increasing premiums, thereby putting, we are told, hundreds of millions into the pockets of everyone but those who, having advanced money on the Government's promise to pay 5 per cent., are now called upon and are willing to take $3\frac{1}{2}$ per cent. only.

If this is right with those who save and risk their savings to help their country, surely it is right, and more than right, for Labour, who save nothing and risk nothing, to make at least equal sacrifices in their agreed incomes. Doing so would enable us to compete and leave behind those countries who are producing more cheaply than we are at present. If money-savers are forced to take seven-tenths of a loaf, let us see that wage-earners do the same thing, especially as most, if not all, these money-savers are losing ground in the pay for their daily work, thus being hit twice just when it is most difficult to square the family budget.

A useful book, which we should have called attention to before, is the second edition of "Hints on Equipment and Health for Intending Residents in the Tropics," by Dr. J. Balfour Kirk, with many letters after his name, who has had a wide-flung range of experience in the tropics. Messrs. Baillière, Tindall and Cox, 7-8, Henrietta Street, London, W.C.2, are the publishers and the price is 3s. 6d. net. Size $4\frac{1}{4} \times 7$. Pp. xii \times 128.

Petrol from Coal and Coal Products.

A New Industry when Coal as Fuel does not Pay.

Now that the Armstrong-Saurer Company of Scotswood, near Newcastle-on-Tyne, can supply heavy oil-burning engines for commercial lorries and other road vehicles, are there not many centres where TROPICAL LIFE circulates which possess coal or its allied minerals which could be turned into fuel for such engines, if not into petrol itself? If this can be done, not only could the home market—be it ever so small a one—be supplied, but, one feels, motor vessels using the same oil could transport the product elsewhere, and thus develop a new industry from mineral wealth now practically, if not actually, waste.

The now almost historical run (in motor transport circles) from London to Aberdeen of two Armstrong-Saurer lorries with trailers, each carrying a load of sixteen tons, moves one to suggest such possibilities. According to the published records heavy oil, not petrol, was used, and both lorries finished the run of 560 miles in 31 hours together. About 70 gallons of this heavy oil fuel, costing about 20s. only, was used by each lorry, and the run was made without a stop of any sort, the drivers taking turns at the wheel. The normal oil on which these vehicles work costs about 4d. a gallon, but on this run waste lubricant drained from the sumps of ordinary cars and usually thrown away, was employed. Twenty-eight gallons of this oil was carried in a tank above the dash of each vehicle, while 64 more gallons were stored in a reserve tank at the side.

So much for heavy oils, the source of which is now stated, but those who want further details can secure them. According to the published reports of the Armstrong-Saurer Company, what is known as Diesel Oil is most widely used on all sizes and types of heavy oil engines, and the British Engineering Standards Association has issued a specification A., Number One, with which Diesel Oil generally has to comply, but experience shows that the fuel oils supplied by most of the oil companies are of a quality far superior to that called for.

Turning to the recovery of petrol from coal, which is the main cause of these notes being joined together, although this section appears last, most of us are aware that much time and money are being, and have been, devoted to research into the uses and possibilities of coal. It is being carbonized, hydrogenated, pulverized, washed and dry-cleaned, in order to discover how to put its valuable products to the fullest possible service. Some of these processes, if the hopes of their promoters are realized, will mean new life for one of the most important industries. (See also p. 142.)



"Tropical Life" Friend.

No. 326.

Sir THOMAS J. LENNARD.

A well-known Empire Worker.

WE first came into contact with "Our Friend" this month through the interest that he has always taken in the History and Trade of the City of Bristol, where he has, for long years, been a leading citizen. During the course of this time he has acquired much knowledge of the city itself, of the trade that it carries on overseas, and especially of the industry with which he has been closely connected, viz., the manufacture of footwear for this country and abroad, a subject concerning which we feel that we could not go elsewhere for more reliable information.

It happens that at the end of last century we were very interested in developing the trade between this country and the tropics in the importation of bird-skins and plumage for millinery and other purposes. Then the trade moved on into weird lines, i.e., the fashion of using snake and lizard skins for ladies' shoes, and it was through this latter subject that we tried to find out from "Our Friend" certain information that was lacking from other quarters. If we were unsuccessful on this point, we certainly learnt much from Sir Thomas in other ways. First let us say that we are by no means strangers to each other, for our Editor, as a Fellow of the Royal Empire Society, knows quite well that Sir Thomas Lennard through his gift of £10,000 enabled the parent Society in London to establish the first branch at Bristol with a fixed income equal to the interest obtainable

from that amount. This is an example that could well be followed by others who have the means at their disposal, but lack, one can only suppose, that love of Empire and interest in the welfare of their people that "Our Friend" possesses to the fullest extent. Not only do we think of him as the donor of the Bristol branch of the Royal Empire Society but also for the unanimous vote which he obtained from the Bristol City Council to purchase the College Green site for the future Municipal Buildings of that city, a city which has been connected with overseas trade from very early, if not the earliest times.

One regret that still exists in our minds in connection with "Our Friend" is the fact that he has not seen fit to take a second tour round the world similar to the one he took in 1886-1888, well over forty years ago. What a tremendous difference will be discernible everywhere by one who travels to-day over the same itinerary that Sir Thomas chose last century, and what valuable knowledge could be brought back by such a traveller in whatever profession or business he was interested in over here. As Vice-President of the Royal Empire Society and also of the Navy League, and as a Fellow of the Royal Society of Arts, "Our Friend" could acquire much knowledge which, in his turn, he could distribute through these useful channels on his return home. As he was born in 1861 he cannot pretend that it is old age which prevents his moving about amidst the extremely comfortable and thoroughly luxurious conditions under which he can travel to-day, providing, of course, that one has the means to do so.

An item of information in connection with the City of Bristol that we encountered some years ago, when studying the annals of the city, is reminiscent of the ever-green dispute in London with regard to the cost of our present-day dock charges, for it referred to the extortionate rates levied by the Bristol Dock Company about 100 years ago and which was considered to have been one of the contributory causes of the decline of prosperity that the city undoubtedly underwent about that time. Fortunately before things went too far, this change of fortune and decline in trade was checked by the efforts of the Bristol Chamber of Commerce—founded in 1823—and by the Municipal Reform Act in 1835, by means of which later on in 1848 the new Corporation was able to buy the Docks, and having reduced the rates, was able to give back to Bristol a big share of the prosperity that she enjoyed in the older days. More recently, of course, with the construction of the new docks and shipping facilities, including the almost world-famous Avonmouth Dock, coupled with the ability and enterprise of her leading citizens, Bristol has come back fully into her own, and in saying this we would place "Our Friend" this month in the forefront of those who have done a very full share in helping this "Queen of the West" to come into her own again.

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Tropical Life.

AUGUST, 1932.

Sisal—High Tariffs v. Restriction.

WHEN, in our April leading article, we spoke of the uselessness of a 10 per cent. tariff with which to fight Yucatan or Java, we believe many were inclined to and perhaps actually did, smile at the lengths we were ready to go if there could be no talk of restriction in our interest. To-day we find that the very proposals we suggested, i.e. a protective tariff of 25 per cent. to 50 per cent.—has actually been proposed by the East African sisal growers and their friends since the Empire Hard Fibres Section of the British Empire Producers' Organization have sent in a memorandum to the Secretary of State for the Colonies to be laid before the Ottawa Conference asking that an Empire preference of at least £5 per short ton (why short tons?) should be agreed to in favour of British-grown sisal against the Java and Yucatan product. One of the great reasons advanced for such a proposal seems to be the present tendency of the Canadian trade to continue to draw their supplies of sisal almost entirely from non-British centres, whilst Australia was also a big supporter of sisal from Java and manila fibre from the Philippines. Full particulars of the proposal submitted to Ottawa can, we feel sure, be obtained from the Director of the British Empire Producers Association at Old Queen Street.

It is difficult to say to what depth in value non-British sisal has descended this year. A price around £10 per long ton has been mentioned and if there is truth in such a figure, then £5 per short ton now asked for means a preference for British sisal of *over* 50 per cent, but even at a price like £15 per ton it means a preference of 33½ per cent. Our suggestions in April were truly an anticipation of what the East African producers were to suggest themselves if they meant business. We feel now however as we felt then, that what the producers in East Africa can rightly consider to be fair and just, speaking from their point of view, may not appeal either to Canada or Australia whatever this country may be willing to agree to, to help Empire trade. This being the case, whilst fighting for the very high preference suggested to Ottawa, let us still keep restriction as an alternative up our sleeve, in case we cannot do better. Hope always for the best, but lay your plans for the second best every time.

In face of the above demand on behalf of the British sisal growers, sisal men everywhere, producers, dealers and users, will be anxious to see how Ottawa treats the proposal.

EMPIRE BROADCASTING.

No. 1.—How to Hear the New Empire Broadcasts.

(Contributed.)

MOST readers of TROPICAL LIFE will have read the announcement that the British Broadcasting Corporation have decided to erect an Empire Broadcasting Station in England and to provide therefrom programmes for all longitudes. A news service is to commence at once from the Experimental Station

There is no journal that I know which finds its way generally into such distant corners of the world as TROPICAL LIFE and to many of its readers this broadcast service from England is sure to be a godsend. This being the case they may be glad to have the following particulars.

Questions.

The beginner in wireless matters will ask three questions.

Firstly, *Shall I be able to hear the broadcasts, and if so, what shall I hear?*

Secondly, *What set shall I buy in order to hear?*

Above all, what firm or firms can I go to, who know what I want in the first place, and what the climate, atmosphere, &c. demand where the set is to be used?

It is already possible to hear the existing experimental station at Chelmsford over a large part of the world and there are very few places therefore where it will not be possible to hear the new Empire Station when it is ready. Possibly there will be a few spots where, for reasons little understood, reception will be poor or even impossible, although a good reception may be obtainable a short distance away. All the same the odds are enormously in favour of satisfactory reception in any place and no one should hesitate to acquire a suitable wireless set for fear that they may be living in a "blind area." Having said that, I will relate my own experiences in order the more easily to deal with the many minor points in the subject.

I have been interested in wireless for quite nine years, and in 1924 took a wireless set out to Africa confident that I ought to be able to hear broadcasts on the elaborate and delicate piece of apparatus I possessed. I heard nothing at all, however, except deafening noises, like bacon being fried, due to electrical disturbances in the tropical atmosphere (technically known as "Atmospherics"). I know of a few others who had similar experiences, and I was therefore pretty certain of my ground when in 1927 a wireless officer on a British India coasting ship told me that he was making a two-valve wireless set upon which he would be able to hear England, Holland and America, and I ridiculed his optimism. He then went on to explain to me that my experiences had been limited to what he called the "medium-

length-waves," whereas he was going to listen to the "short-wave-lengths" which behaved quite differently and were relatively free from the deafening noises of atmospherics. He was sufficiently convincing for me to ask him to buy such a set for me.

Several months later this new set arrived after a week's journey through the bush on a runner's head. I read the instructions very carefully, and installed the set. It was three days before I got the knack of working it, due to the pooriness of the instructions, and then I heard—very very faintly—what sounded like one end of a telephone conversation in English. I made slight adjustments, and the sounds promptly vanished. After an hour or so's manipulation the speech suddenly burst out quite loudly in the earphones. It had been there all the time, but I had not understood how to get it. I then discovered that I was listening to a test between the British Station at Chelmsford and a station in America. I could even faintly hear the American's voice and follow the whole conversation which was informal and chatty.

A night or two later I was listening at about nine p.m., when I clearly heard the English Station again, announcing that they were beginning the evening programme, and a few seconds later I heard in Africa the boom of Big Ben striking seven o'clock. I think it was the biggest thrill I have had in my life.

Having to be out the next day before dawn, I switched on the set to hear if anything was working, and to my astonishment heard a loud clear American voice giving out news from New York. I then discovered the curious fact that whereas I was listening to him at 5 a.m. on Wednesday, he was speaking at 10 p.m. on Tuesday. There seemed a catch somewhere, but on working it out I found, of course, that it was quite correct. Within a week I had collected quite a list of stations I had listened to—England, New York, Holland, Java and Sydney.

Since then I have listened-in very often. On three occasions I have picked up information of much value, and on and off I have had a great deal of entertainment and pleasure out of it. The only trouble was that I could never get British news because it was not transmitted from the British Station, and also that nothing was broadcast on Saturdays and Sundays, which were the two evenings one would be prepared to sit up late enough to hear the best part of the programme. In India the station was not received until midnight, and so very few listened to it at all; also it was not well received there, although other stations came in quite clearly. All these troubles will shortly be over. News will now be transmitted several times during the day, so that every Colony and Dominion can pick it up at a convenient time, and the tendency for the British station to be badly received in certain parts of the world will be overcome when the new station is working.

(To be continued.)

Commodities—the Retail Side.

SIR AUSTIN E. HARRIS, as Chairman of the National Bank of New Zealand, told us on July 12th, that: "Commodity prices have continued on the down grade, without any definite signs of improvement. It is this low level of prices of commodities—many of which are to-day being sold at an actual loss—which is perhaps chief of the many troubles affecting the world.

"Whether the root of this particular trouble springs from over-production or from a general lack of purchasing power, aggravated by the burden of international debt and crushing taxation, and how far other causes, such as currency difficulties and the extravagance of recent years, are contributing factors, are questions which continue to engage the attention and provoke the controversies among experts and others.

"Economic laws of supply and demand, combined with public and private economy, would doubtless in time work their own cure, painful and prolonged though the process might be; but they have to-day been tampered with by so many extraneous devices of man that it would not seem impossible to expedite recovery by rectifying mistakes that have been made and by removing some of the barriers, artificially created, which are hampering a return to the normal."

Mr. Guy Collier, chairman and joint managing director of the International Tea and Provision Stores, said on the same day that: "In August of 1931 it was brought home to the British people that they were up against the most serious financial crisis that had probably occurred for over 100 years. Had British credit gone in the autumn of 1931 the International Tea Company, in common with all other trading concerns, would probably have gone with it. We should all be very grateful to those political patriots who put country before party.

"I will quote just a few rough figures to show the magnitude of your business. We buy, and either use or sell, over 1,000 tons of sugar each week. We buy, and then prepare and smoke, something like 16,000 sides of bacon each week. We make 10,000 tons of jam and marmalade, and 12,000 tons of cake and biscuits each year."

"A source of anxiety to us," stated Mr. Colin Cooper, their vice-chairman who followed, "is the steady fall in the spending power of the public, which owing to the world slump and heavy taxation is day by day being reduced. Fortunately, it is true that food and the necessities of life are the last items upon which human beings will economize. Cheapness of living is a double-edged weapon. I would like to see 'Ease of Living' and not 'Cheapness,' for when living drops below a certain cost it means that on practically everything we have distributed to our customers the producers of the raw material have made a loss, and, as the producers of the raw material are the foundation

of all prosperity in trade, it is impossible to disregard this, and I say with all the sincerity at my command that in my opinion there can be no permanent revival until we get an increase of prices to a level which will give the producers of the raw material a profit. (Hear, hear.)

"Last autumn I paid a flying visit to the United States of America on behalf of your company. The opinion I formed from my visit was that, generally speaking, the shops used for the distribution of groceries and provisions in the United States are what we had in this country some thirty years ago. With exceptions, they are very poorly and cheaply fitted indeed. The assistants have no white clothes, and very often serve in overalls or in grey flannel trousers and vests. Service generally, and particularly delivery to the customer, is practically unknown."

Meanwhile, the dollar to-day is said to be the world's strongest gold currency although the same as the franc, it is still unable to take international confidence from sterling.

Letters received in London, *West Africa* tells us, during the week ending July 9th, state that Dr. Cuthbert Christy, the head of the League of Liberia Inquiry, whose death was reported a month ago, died as the result of being wounded by a buffalo, during a hunt in the Aka River district of the Congo State.

Knowing the physique and powers of endurance of Dr. Christy we had been wondering what caused his death and whether it was not due rather to accident than illness. According to the above news our conjectures would appear to be correct. This is how the *Morning Post* reported the tragedy, for tragedy it is indeed, and a great loss to Africa and the tropics generally.

"While out with two boys on May 27th, Dr. Christy sighted a small herd of buffaloes. At a range of sixty yards he fired two shots, hitting a male buffalo. Two more shots and the animal fell to the ground, with a hind leg shattered. A fifth shot struck him near the tail, but he was still able to move quickly for swiftly the enraged beast rose, and, dragging its wounded leg, charged towards the men. They fled for safety, but Dr. Christy received a tremendous blow, was flung into the air, thrown down on his head, and gored in the right thigh. Finally, one tracker succeeded in planting his spear in the animal's neck, and the other despatched it with three bullets from his Mauser.

"Dr. Christy was taken back to the camp. Suffering agony in his back, chest and shoulders, he superintended the washing and bandaging of his wound. A runner was sent to the nearest station, fifty miles away, and a medical assistant set out for the camp with all possible speed. But Dr. Christy grew rapidly worse. On May 29th, knowing that the end was near, he sent all his companions out of his tent—and died alone at 2 p.m."

MARKET REPORTS, GOSSIP AND PRICES.

WE all have much to say against banks and the bankers and how octopus-like they throw their feelers throughout their own countries and over the world, with sponge-like absorbers at the end of those tentacles (Latin *tento* to feel) generally known as branches, and having absorbed any spare cash, they keep it. Sphinx-like to the bulk of us, who know not the magic word which opens the door, we can hammer as we will, but not even a peep-hole is there to see who it is, and so it seems we can all remain outside and die, whilst wealth galore is piled up within; and yet,—

When you read and study the monthly reports issued by any one of the big five banks, you must, if impartial, agree that if these institutions are slow at allowing access to their wealth as bullion, they are liberal in the way they offer you access to their wealth of knowledge. Take the July *Review* of the Westminster Bank as a casual example and read their opening paragraph as under; surely the most casual observer of the ways of the world to-day must realize what long tails stream out into the world of politics, finance and economics, to be able to bring to headquarters the opening summary contained in that paragraph of the truly wonderful outline of the restless world everywhere as we know it to-day.

Discussing the "Prospects of Recovery" this paragraph tells us:—

"It is little more than a year since a conscientious director of the Credit-Anstalt, of Vienna, asked for a revaluation of that bank's assets, and applied the spark to a train of consequences which changed the setback in world economic activity of 1930-31 from a regular cyclical depression, by way of a major world crisis, to a threat to modern civilization. Within three or four months, the pound sterling, the most international of all currencies, had been forced off the gold standard, and that standard had ceased to be employed as a currency basis by approximately half the world. Only after twelve months were the Great Powers of Europe sufficiently at one to meet around a common table to consider accomplished facts as an essential first step towards their removal. The concrete results of the Lausanne Conference are of supreme and immediate importance, but their moral effect will be even more considerable. For the first time, the statesmanship of Europe has proved equal to the task of saving Europe. Democracy and a reasonable nationalistic *amour propre* have been proved compatible with a wider co-operation for international well-being. Much remains to be done and many obstacles to be removed, but a grateful and restored world may survive to look back on July, 1932, as the turning-point in a crisis whose logical beginning was not 1930 or even 1919, but August, 1914."

Having absorbed the above, if you do come across the entire *Review* you will, one feels sure, be as struck with the information given concerning

everywhere and the deductions drawn or to be drawn from what you are told, as the writer was.

Exports from the United States, during the first five months of this year, January/May, fell some \$400,000,000, say even £80,000,000 at par, including a drop of £3,500,000 in her exports to Canada and over £2,000,000 to this country.

Taking the completed half-year (quoting the *Morning Post*) Great Britain, on the basis of trade returns for the first six months of this year, has regained, by a considerable margin, her supremacy as the greatest exporting nation in the world—a position she held throughout the industrial era up to the beginning of the Great War.

Estimating the comparative exports of this country, America and Germany in sterling at par for the period January to June, the following striking figures are revealed:—Great Britain, £187,000,000; America, £168,300,000; Germany, £149,500,000.

In the corresponding period of 1931, the returns were:—America, £263,200,000; Germany, £238,400,000; Great Britain, £199,200,000.

Moving on to our usual market gossip we come to:—

Vegetable Oils (London and Liverpool).

With palm-oil the general idea is that this market, like many others, is dull. All the same, one has to note that Lagos is quoted, as sellers' price for Aug.-Sept., at £16 5s. against £15 10s. for June/July last month. The idea for Softs, Aug./Sept. shipment, is £15 2s. 6d. against £15 10s. for mediums and £15 2s. 6d. for Red Sherbro, all per ton.

It will almost sound ridiculous to a linseed grower to be told that, in common with his and other crops, present prices for linseed cake are unremunerative and below the cost of production. When shall we hear the last of these tales? "How can it be claimed," one hears a producer ask, "that the cost of linseed cake is below the cost of production? If it does not pay to turn a ton of linseed into oil and cake, why trouble to do so? In any case, after the oil has been marketed, let us say at a loss, if the mill cannot make that loss up on the cake, can it be truly said that the cake can only be sold at a price below the cost of production?" Be this as it may, the mills are in no hurry to cut prices, especially as it is felt that the demand and consumption should be increasing in the near future, at least for a time. Possibly this is why prices are about 5s. up, say £7 15s. to £8 for English made, against £7 10s. to £7 15s. before, whilst imported, from Empire centres, is quoted at £7 to £7 7s. 6d. against £7 ex ship. Sales have been made recently for cotton cake, Egypt, at £4 5s. ex ship, duty paid, but sellers want better value now, say £4 7s. 6d. to £4 10s. against English made at £4 17s. 6d. to £5 ex mill.

With regard to other products, we will start as usual with:—

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
July	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	14 17 6	13 17 6	13 15 0	13 5 0	13 5 0
20	15 2 6	14 0 0	13 17 6	13 5 0	13 10 0
16	15 2 6	14 0 0	13 17 6	13 5 0	13 10 0
13	15 7 6	14 5 0	14 2 6	13 10 0	13 12 6
9	15 7 6	14 5 0	14 2 6	13 10 0	13 12 6

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation f.m.s. on July 23rd, £13 7s. 6d.

OTHER OILS PER TON.

	CASTOR FIRSTS	GROUNDNUT CRUDE*	COTTONSEED CRUDE EGYPT	LINSEED SPOT†	SOYA BEAN SPOT, NAKED	PALM KERNEL OIL‡
July	£ s.	£ s.	£ s.	£ s. d.	£ s. d.	£ s.
23	36 10	34 5	20 10	14 15 0	21 15 0	22 10
20	36 10	34 5	21 0	14 10 0	21 15 0	22 10
16	36 10	34 5	21 0	14 10 0	21 15 0	22 10
13	36 10	33 15	21 0	14 10 0	21 15 0	22 10
9	36 10	33 15	20 10	14 10 0	21 15 0	22 10

Soya-bean Oil. Oriental to the Continent, July/Aug. is worth £17 15s. per ton in barre's.

* Crude, naked. † Net, naked, ex-mill. ‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL) CALCUTTA	GROUNDNUT LA PLATA	COTTONSEED EGYPT BLACK	CASTOR BOMBAY	SOYA BEAN GROUND- NUTS	MANCP. AFLOAT
July	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	9 11 3	7 18 9	6 15 0	11 15 0	15 2 6	6 15 0
20	9 12 6	7 18 9	6 11 3	11 17 6	15 0 0	6 15 0
16	9 12 6	8 1 3	6 11 3	12 0 0	15 2 6	6 16 3
13	9 15 0	7 11 3	6 12 6	12 7 6	15 10 0	6 16 3
9	9 12 6	8 1 3	6 15 0	12 5 0	15 5 0	6 16 3

COCONUT OIL PER TON.

Ceylon mill oil on July 29th was quoted at £27 10s. per ton for spot parcels against £22 2s. 6d. (cylinders) for July-August. English deodorized in barrels is worth £34 against £32 15s. a month ago.

Desiccated Coconut.

This market remains quiet with fine on the spot quoted at 23s. 9d. and medium 23s. For July/August shipment the price is put at 20s. 9d. c.i.f.

Rubber.

The middle of July was considered to have seen a firmer tone in the market with prices 3/32d. higher, though still just below 2d. lb. even after the rise. This level of values was maintained up to July 20. Generally speaking, the market is not in a gossip mood, and you miss many well-known faces up and down the Lane.

In one corner two men were trying to agree as to the exact meaning of the last two rubber bulletins from Java, viz., the A.V.R.O.S. experimental rubber series No. 85 and 86. The first report discussed the yields obtained from "Legitimate" seedlings in 1930, and runs on from reports No. 71 and 78 of the same series, whilst report No. 86 continues the discussion on yields where No. 77 left off. Both these new reports are by Dr. C. Heusser, and published in English. Readers must secure copies if they wish truly to understand

what our Dutch friends have to tell us. Whatever it is, you can be sure that it is both reliable and useful.

Coming to the usual market news from Messrs. Lloyd, Matheson and Carritt, we find that with regard to ourselves the Board of Trade returns show that 37,928 tons of rubber were delivered for home use from January to June this year, against rather less, viz., 36,931 tons during the same six months in 1931. The American figures for the half year have yet to be made up, but during June 39,116 tons went into consumption against 29,197 tons during May, and 37,916 tons during June, 1931. Our half year therefore runs about equal to a single month in America. Cannot we improve upon that?

On June 30 the stock and afloats of rubber in America ran into 388,881 tons, against 396,687 tons on May 31, and 294,957 tons on June 30, 1931. Moving on to prices, these are returned by Messrs. Lloyd, Matheson & Carritt as follows:—

	1932 JULY 20TH	1932 JULY 13TH	1932 JULY 6TH	1931 JULY 22ND
SPOT QUOTATIONS—	s. d.	s. d.	s. d.	s. d.
Smoked sheet (F.A.Q.)	0 1 ² / ₃₂	0 1 ² / ₃₂	0 1 ¹ / ₁₆	0 3
Crepe (F.A.Q.)	0 2 ¹ / ₂	0 2 ¹ / ₁₆	0 2 ¹ / ₂	0 3 ¹ / ₈

	JULY 20TH	JULY 13TH
FORWARD POSITIONS—	SMOKED SHEET	SMOKED SHEET
	s. d.	s. d.
1932, July	0 1 ⁷ / ₈	0 2 ¹ / ₂
„ August	0 1 ⁷ / ₈	0 2 ¹ / ₂
„ September	0 1 ² / ₃₂	0 2 ¹ / ₂
„ October/December	0 1 ³ / ₃₂	0 2 ⁹ / ₁₆
1933, January/March	0 2 ¹ / ₃₂	0 2 ⁵ / ₈
„ April/June	0 2 ¹ / ₈	0 2 ¹ / ₁₆

	1932 TONS	1931 TONS
STOCKS—		
London, Week ending July 16th	49,327	81,766
Liverpool „ „	57,622	54,697
Total	106,949	136,463

SINGAPORE QUOTATIONS—

July 20th.—Spot, 5⁵/₈ cents; October/December, 1932, 5³/₈ cents; January/March, 1933, 5¹/₈ cents.

July 13th.—Spot, 5⁹/₁₆ cents; October/December, 1932, 5¹/₈ cents; January/March, 1933, 6 cents.

Balata.

This article continues with a market unruffled as unchanged. The Dutch article is put at 1s. 5d. to 1s. 5¹/₂d. c.i.f., subject to duty. British, free of duty, is worth 1s. 8d. on spot against the same price c.i.f. One wonders why. Of other foreign kinds liable to duty, Venezuelan block is quoted at 10d. spot and 9d. c.i.f., Iquitos 3d. to 4d., Panama 11d. to 1s., all more or less nominal.

Cotton.

COTTON v. JUTE.

Writing in their issue of July 16, our Manchester contemporary reported that a meeting of the Joint Egyptian Cotton Committee formed under the

auspices of the Egyptian Government and the International Federation of Master Cotton Spinners' and Manufacturers' Association was held at Windermere this week. Mr. W. H. Catterall presiding.

A discussion took place on cotton covering for bales¹ and the elimination of jute fibres detrimental to spinning qualities, and it was stated that experiments were being undertaken by the Egyptian Government, in co-operation with exporters and spinners, with a view to overcoming present difficulties. The question of extracting dust from raw cotton ginneries was discussed, and the secretary read a description of a new appliance placed on the market by the textile machinists. A member of the committee said his firm of exporters would undertake experiments and report at the next meeting.

Other subjects discussed were all of a technical nature and included the extension of the agreement between the Egyptian cotton spinners and the cotton exporters of Alexandria on the standard of moisture of Egyptian cotton adopted at the Paris congress last year. This agreement allows for a payment by the exporter of any excess moisture on cotton shipped above 8.9 per cent.; on the other hand, spinners receiving cotton below 8.1 per cent. moisture contents, refund the difference to the shipper.

At the close of the conference it was agreed to hold the next meeting at Prague in June next year. His Excellency Ahmed Abdel Wahab Pasha was elected president of the committee.

On July 13th the committee made a tour of inspection of the Manchester Docks where a test was made by an apparatus invented by Dr. W. Lawrence Balls for ascertaining moisture content in bales of cotton.

The usual market reports go to show that recently the Manchester market presented a rather more cheerful appearance. There has not been increased activity in all sections, but many producers have been able to report a larger inquiry, and in one way and another the turnover has shown an improvement. The wider fluctuations in raw material rates are somewhat disconcerting at the moment, but the opinion is gaining ground that values are not likely to go lower, and in the circumstances buyers are displaying rather more confidence.

In America the market seems to have been an erratic one. The results of the Lausanne Conference created a better feeling concerning Europe.

If the yield returns are correct, America this year will get much more cotton from a smaller area since the United States Government's acreage figures of 37,290,000 indicate the smallest area

placed under cotton within the past ten years. In 1923-24 the area was 38,701,000 and the growth 10,985,000 bales. The yield then was 130.6 lb. per acre. This season the yield per acre is estimated at 201.2 lb., against 147.7 lb. per acre in the previous season.

With regard to prices the following were the official "spot" prices in Liverpool on July 15 and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	4.66*	4.87*	4.91*	7.58*	6.83†
Strict Middling American	4.76*	4.97*	5.06*	7.78*	6.95†
Fair Pernam	4.73	4.94	4.96	6.88	6.82
F.G.F. Sakel. Egyptian	6.65	6.90	7.50	12.20	9.55§
Fine Broach	4.27	4.49	4.04	5.30	6½
Fine No. 1 Oomra	4.18	4.40	3.84	4.50	6
Fine Bengal	3.78	4.00	3.59	4.30	5½

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Coffee.

Regarding the death of Mr. Santos-Dumont, a correspondent writes: "Time passes quickly; Alberto Santos-Dumont is no more, and although one can well exclaim, and only 59, even that age makes one remember the years back when at the age of 24 or a little more, he attacked the problem of the dirigible balloon, and triumphantly guided one round St. Paul's in the City. 'Wonderful! Wonderful!!' said the crowd; and they were right; but how we have advanced—is it entirely for our good—since then.

"I remember all this quite well, for on the same day as Santos-Dumont encircled St. Paul's I was writing an article on the 'Ancient City of Bath,' and Bladud, son of Lud Hudibras, who ruled over that part of the world. This Bladud founded Bath as a centre for healing lepers, as in his own case and later, when he ruled in his father's place, he went crazy over flying, with wings attached to his arms and shoulders. One day, however, ill-luck attended his efforts, for falling to the earth he broke his neck. A statue of him to commemorate his founding of the city is, I believe, to be seen in one of the chief buildings connected with the Pump Rooms at Bath to this day. Posting my notes, I expressed my gratitude that Dumont had not suffered the same fate.

"The upheaval in Brazil, especially around Sao Paulo, where the Dumont family live (or used to), has prevented reliable news from coming through with regards to the details. There is no doubt, however, that the pioneer of dirigible flying had been very ill for some time, and died, it is understood, on Saturday, July 23rd. By the time this issue is published full particulars, no doubt, will have been received."

Now that sugar—through no fault of its own—is failing Cuba, one wonders rather why that island

¹ On p. 157 we report the sale of 30,000 tons of Yucatan sisal fibre to weave into cloth for baling cotton. If cotton cloth is used by some and sisal cloth by others, jute will be "feeling the draught" badly.

does not turn to other industries and at least produce all the coffee it needs. What about the Trinidad mountains of the Santa Clara Province; how do the soil and climatic conditions there compare with other mountain areas, world-famous for their coffee? At present this area is said to produce only about ten per cent. of Cuba's total production of coffee. Is there land in that district suitable for producing more, and if the actual area is available what about soil erosion? Is this trouble likely to check progress as it is doing elsewhere?

Last year the Orient Province of Cuba produced nearly 600,000 quintaux, 595,000 actually (each 101.4 lb.), against 518,630 in 1930 and 343,140 quintaux in 1926, when, however, the smaller crop realized or was valued at 9,264,780 dollars whilst last year's much larger output was worth 6,543,515 dollars only. Last year trade statisticians reckoned that over 800,000 kilos (not quintaux) were imported, the home production, in spite of its increase, not being sufficient to cover the needs of the local consumption; but why import any at all? What is received comes from Colombia and Central America. Cannot Cuba produce as good coffee at a cheaper cost delivered than these imported parcels must run to? We do not wish to check the trade of these other centres but do feel that Cuba, after all she did for the world during and immediately after the war, should not be left in the slough of despond into which other countries have pushed her now that they are on their legs and feel strong again.

Whatever the effect the Cacao Institute of Bahia may have on that market it will be interesting to see what are the results of the launching of the Associated Coffee Industries of America, backed up by the biggest consumer (the U.S.A.) and the biggest producer (Brazil) in the world (see *The Spice Mill* of New York, for June, p. 668). Actually speaking Brazil and Colombia are said to be ready to "co-operate" with the new organization, especially in connection with the work of increasing consumption. The organization generally is to be representative of all branches of the coffee industry and so able to present a united front to any troubles and competition that the trade may have to face whether in consuming or producing centres. From its title we feel that only the United States and Latin America will be affected directly.

Coming on to London the Public Sales of late have been on the small side but some Jamaica mountain-grown as usual sold well, say:—No. 1 size 200s. to 226s., No. 2 145s. to 203s. 6d., No. 3 116s. to 123s., peaberry 120s. to 207s. Of other kinds B1 realised 140s. to 173s. and B2 112s.

Kenya.—Fetched 48s. 6d. to 60s. 6d. for small, 59s. to 62s. for seconds, 61s. to 65s. for common greyish and greenish. Peaberry sold at 56s. 6d. to 65s.

Toro realised 53s. for a parcel of peaberry. Many lots were withdrawn, for although the quantity offered was small buyers were either not attracted or in too much of a holiday mood to buy.

Other Products.

Tea, apparently, had nothing, on the whole, to complain about at this week's (ending July 23rd) batch of auctions. Indians met with good competition and a firm tone prevailed, with a tendency for prices of the cheaper kinds, say up to 6d. per lb., to harden. With Ceylons, prices were fully maintained, and in some cases slightly advanced. Java and Sumatra teas on balance were considered to show steady rates.

Moving on to fibres, prices for jute were expected to rise in face of the increased purchases reported from Calcutta, but nothing much came of these hopes and, at present, if sellers expect to receive higher bids, buyers are playing a "wait and see" game. The German spinners are said to have been doing better both with cloth and bags. With all this, if prices have not risen, they must have been steadied by such news. Imports into Dundee this season seem to have been very much heavier. The year, of course, runs from August 1st to July 31st, so it is practically complete. So far, the imports into Dundee have reached 790,605 bales, against 598,860 to the same period last year, and 599,962 bales for the completed year to July 31st, 1931. As to prices, old crop has been sold to the Continent at £14 13s. 9d., and new crop at £15 2s. 6d. c.i.f.

Moving on to Manila hemp, Messrs. Wigglesworth speak of the island receipts as being considerably less, say 450,000 tons against 652,000 last year. The stock on hand, although less, is not so markedly so at 103,000 bales against 120,250 bales before. Quotations are higher and include: J.2 at £19 against £17 10s. in June, K at £17 10s. against £15 15s., M. No. 1 £15 10s. against £13 10s. all c.i.f. With East African sisal, the price for No. 1 grade is said to have touched £12, and then, as if ashamed of having been caught napping, it recovered and is now quoted £15 10s. for No. 1 f.a.q., and £14 5s. for No. 2 grade c.i.f.

An important change is said to have taken place in regard to Yucatan sisal, a change that can but benefit the demand for the fibre. With East Africa and its progressive cotton estates, when will the same demand arise in their go-ahead territories? "Hitherto," again quoting Wigglesworth, "the production of Yucatan sisal has been used almost entirely for binder twine manufacture but now large sales are reported totalling over 30,000 tons (at 400 lb. to the bale, this means 168,000 bales, and this report should be compared with the statement on p. 156 concerning the use of cotton cloth for baling cotton lint.—Ed., T.L.) for the weaving of cloth for cotton bale coverings, and undoubtedly this new departure must relieve the position of stocks which have been weighing somewhat heavily on the general position for some time." We hope this will be so.

Shellac on the spot is steady with TN at 56s., Fine Orange 65s. to 130s., AC Garnet 60s., and RLI button at 67s. 6d. cwt. against 54s., 65s. to 130s., 60s. and 67s. 6d. respectively a month ago.

Palm kernels are steadier at £10 8s. 9d. per ton to Hamburg c.i.f. against £10 2s. 6d. before. Coming to metals, Tin has been through many changes. It was steady, then quiet, steady again and then irregular and weak, finally closing at £124 15s. to £125 for cash or about £10 better than the June price whilst being on a parity with May. Copper has been "very sick, poor thing" at times but is rather better now at £25 7s. 6d. to £25 10s. against £27 5s. in June and £28 10s. in May for standard cash.

Coming to finance, bank rates show no change:

New York is still at $2\frac{1}{2}$ per cent., Milan and Berlin 5 per cent., Paris $2\frac{1}{2}$ per cent., the Swiss Bank 2 per cent., and Brussels $3\frac{1}{2}$ per cent. Bar silver is quoted $16\frac{1}{2}$ per oz. against $16\frac{5}{8}$ a month ago, whilst gold is worth 115s. 11d. as compared with 114s. 2d. in June. This makes our table work out thus:—

JULY 23RD	1932	1931	1930
Bank rate	2 per cent.	$3\frac{1}{2}$ per cent.	3 per cent.
Consols $2\frac{1}{2}$ per cent	$72\frac{3}{4}$	$59\frac{1}{2}$	$55\frac{9}{16}$
Bar silver per oz.	$16\frac{1}{2}$	13d.	$15\frac{3}{4}$ d.
Exch. on New York	\$3.55 $\frac{1}{2}$	\$4.84 $\frac{3}{4}$	\$4.86 $\frac{3}{4}$



THE WORLD'S COCOA MARKET.

BY THE CONTROLLING EDITOR.

IF the selling department of the world's cocoa market has been dull, at least from a producer's point of view, our inquiry department during the past month clearly shows that interest in the industry continues unabated. One inquiry which is still causing a good deal of controversy concerned the advisability and advantage of using wire filter cloths when extracting the oil from cocoa beans (see the July issue, p. 129), and now all the way from Rio de Janeiro via New York comes a somewhat scientific query as to the best method for storing, fumigating, and preventing fermentation in stored cocoa beans. Our friends are particularly interested in solving the problem of avoiding a large percentage of mould and worms in the beans, and this, they understand, is being done by some process of fumigation.

The matter was referred to Dr. Ciferri who wrote at length on the matter, saying that when experimenting on cocoa in Santo Domingo he obtained very good results for the control of worms and moths by using carbon disulphide (CS₂). If the warehouse is protected by copper cloth of small-sized mesh applied to windows and doors, he goes on to say, one fumigation will be as a rule, sufficient. On the other hand, unprotected warehouses and storehouses containing cocoa beans must be fumigated many times according to the length of storage and the frequency and intensity of the infection; above all, empty storehouses must be fully fumigated before fresh cocoa is stored. Fumigating with CS₂ does no harm to the beans. How matters in Brazil compare with San Domingo has to be ascertained, for some areas are damper and closer than others, but generally speaking what suits the beans in one centre is worthy of a trial at the start in another.

And now comes a letter from the chemist of a leading manufacturer in America concerning filter cloths for cocoa oil or butter and this tells us: "We use fine wire pads made of steel or monel metal in our regular pressing of chocolate liquor for cocoa and they have worked satisfactorily for us. If time and space permit, cocoa-butter will

clarify itself surprisingly well if allowed to stand undisturbed in a tank for two or three days at about 140° F. The butter must then be removed without disturbing the layer of sediment at the bottom."

* * *

Can anyone say what happened as a result of the patient and enthusiastic work that the late Sir George Watt expended about fifteen to eighteen years ago to perfect the methods employed both in the cultivation and manufacture of cocoa. Did the last term—manufacture—extend beyond the processes necessary on the estates, i.e., into the factories of the makers of the finished article? Who can say?

All I know is that around 1914/15, Sir George wrote a pamphlet, which is before me, describing his proposals and process, and, at that time, the intention was to keep the results of the investigations and discoveries more or less private until the new scheme for plantation manufacture (Sir George's own term) was fully matured and had become covered by an established syndicate for its practical utilization. Famous progress was reported, models were made and patents passed when the War came and put an end to the activities at least for a time. In July, 1919, those interested were told that the patents could be renewed and two out of the lost five years could be recovered by paying up all the arrears, leaving only ten years' protection for the patents of apparatus not yet on the market . . . after that there has been silence on the subject. Dr. Ciferri's report, however, revived memories of a letter in which Sir George Watt told the writer that his idea was to bring about direct fermentation both by mechanical and fungal contrivances or agencies, such process to reduce the delay in natural or spontaneous fermentation from five days to as many hours, and it was considered that the proposed mechanical fermenting contrivance, when patented (and one feels perfected), would be far and away the best ever yet thought of. What has been the results or what was the end of such pleasant dreams for everyone

truly interested in the preparation of cocoa for market and then for consumption?

Sir George published a pamphlet on the whole matter, dated from Annandale House, Lockerbie, Dumfriesshire, February, 1915, in which his views on Fermentation, and the doing away with "the present clumsy, dirty and most unsatisfactory methods" occupy a space ranging from the bottom of p. 5 to p. 7. Who has a copy of this pamphlet, in which one feels there may be some useful facts, especially if backed up by the investigations carried on during the past seventeen years? A complete record of such a combination of investigations could well be studied with advantage.

Take another idea described as the "ginning machines" for removing the seeds from the pods. Have any comments been made on those proposals? Have they ever flitted across the eyes of Mr. John Gordon, the engineer of London who has devoted the best part of his business career also in studying and perfecting apparatus for preparing cocoa beans for market, but not after. Had Mr. Gordon only shared our enthusiasm for advertising his truly wonderful machines, they would be far better known to-day, as they deserve to be, but are not. Going back however to the "Cocoa Ginners" these were to be worked, either by hand amidst the trees on the estates, or by power in the central buildings, in order to remove the placenta or centre stem to which the seeds are attached, instead of breaking open the pods and tearing out the contents by hand. Here one is reminded of Dr. Ciferri's complaint of how present methods encourage the distribution and increase of undesirable spores, ferments &c., for one of the "immense advantages" claimed by the "ginner" was in checking the spread of disease even if that which is put aside is used as manure.

It must be remembered that Sir George Watt before working on these appliances had made a lengthy (I believe) and thorough investigation on the actual estates out in San Thome. Where else he had studied cocoa on the spot is not reported but as a result, in July, 1919, the end of his last letter on the subject reads thus:—

"I am abundantly satisfied that the by-products on the cocoa estates at present wasted could and should prove valuable additions to the revenue of the holders. [What a heavenly note to be sounded in the ears of cocoa planters at the present moment. Ed. T.L.] The manufacture or preparation of cocoa on the plantations is crude and wasteful at each and every turn, from the planting and cultivation to the collection and manufacture up to, finally, the method of shipment. The contrast between present-day tea-planting and cocoa-planting is most significant. No tea-planter could visit a cocoa-plantation without feeling that he could suggest dozens of improvements, each of which would give an immediate increase to the earnings of the estate and its owner. There is a great future in a reformed cocoa industry (up to

the doors of the manufacturers' buildings) in the hands of enlightened and enterprising planters—British by preference—but when shall we see the start made to reach such a goal?"

Our Board of Trade Returns for the Half Year,

Here one is pleased to see that so far as our deliveries for Home consumption are concerned the current year still keeps ahead of its immediate predecessor, but not at all pleased to see how far both are behind—so far as June only is concerned—the figures for 1930. Last month the U.K. imported, of all growths, 1,857 tons as compared with 2,653 tons last year, and 1,698 tons in June, 1930. For Home use this June, 3,787 tons were delivered against 3,461 last year and 5,473 tons in 1930. Taking the half year as a whole, the figures work out as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

RAW COCOA ONLY	LANDED	JANUARY—JUNE.				STOCK JUNE 30
		INCL. B.W.A.	DEL'D. H.C.	EXPORT		
JAN.-JUNE	TONS	TONS	TONS	TONS		TONS
1930	45,329	43,607	28,715	1,063		45,900
1931	52,566	50,030	32,027	1,991		46,350
1932	50,571	48,460	35,543	1,640		42,150

Dec. 1,995 Dec. 1,570 Inc. 3,516 Dec. 351 Dec. 4,200

Coming to prices and values these remain steady even if trade is quiet and there are more than one reason why it should be so at this time of year, although at the moment it cannot be pretended that the great heat is one of them. Values have been fluctuating a good deal, but left off below the best, as finally Accra kinds G.F. to the Continent finished around 27s. 6d. and mid-crop 22s. 3d. Of new crop Nov./Jan., 1932-33 shipment 26s. 6d. c.i.f. is asked against 24s. 9d. f.o.b. old crop for F.F. Lagos, new crop is put at 25s. 6d. c.i.f. after fluctuations varying from 26s. 6d. to 25s. 3d. On the term market, the fluctuations during the last twenty-nine days did not prevent the last quotations being only 3d. to 7½d. above those of July 1st.

Spot values include Grenadas still quoted up to 38s., with Bahias at 36s., against 29s. c.i.f. Spot values of Trinidad range up to 50s. or a little more against 37s. c.i.f. as the top price on forward terms. Against the above quotations for Accras, spot values range from 27s. 6d. for fair up to 29s. for good fermented. Other growths in proportion.

* * *

The Imperial Economic Committee has issued as its twenty-second Report, the results of an examination of witnesses in connection with the Cocoa Industry within the Empire from start to finish. Producers, merchants and manufacturers we are told have been examined, but never a name nor an idea is given as to the experience or the value of the opinions of those who were examined.

This surely is a serious omission, as the report without any names hardly carries the weight as an authority on the subject of an annual report by any leading dealer or broker, since their name at least appears at the head of the report.

In spite of this defect all wise men (and women) interested in cocoa, raw or manufactured, should secure a copy without delay and study the contents. The cost is only 6d. net., or 8d. post free, from Adastral House, Kingsway, and the usual agencies, and well worth the money for its 91 pages have much to tell you about the trade generally, its wonderful growth (but not the reasons of the undoubted check in its popularity especially just now), proposals for advertising (p. 18), methods of improving the marketing organization, &c. At producing centres, the situation in the West Indies and the position of fine cocoa are discussed. Then we come to the manufactured side, the question of research and the use of "talkies" in agricultural extension work. The last eight or nine pages are given up to appendices with statistics of the raw and manufactured article.

There are a number of wise "saws" in the "Conclusion" on pp. 77-82 and probably elsewhere, for instance:—

Par. 214 says "The low price level has accentuated the imperfections of present marketing methods in producing centres. It has also made an effort to remedy those imperfections both more urgent and more difficult."

Par. 215 starts by saying that "On the Gold Coast, the existing methods of marketing, which are the outcome of primitive trade conditions, are no longer adequate to ensure an economic inducement to the African farmer for greater care in the preparation of his produce."

Par. 216. "The possibility of combining this voluntary scheme (outlined in par. 215) with one of compulsory grading and inspection depends on the willingness of the trading community to substitute a price differentiation for the present flat-rate system in buying from the farmer.

Surely, if there is so much to say about inspecting and grading, which means accepting or refusing the raw material which we all know passes into the hands of keen, experienced buyers, arrangements should also be made, since they are even more necessary, to inspect and pass or reject the manufactured article which goes into the hand and down the interiors of those who know nothing at all about the article, and those who know the least, generally buy the cheapest makes which need the greatest, probably the only, attention. Above all, if the authorities really want to help the planters, let them refuse to pass any manufactured cocoa mixed with butter substitute or, at the least, insist that such products are clearly marked on the wrappers, and better still, on the product itself. This question of genuine cocoa-butter *v.* butter substitute, one is glad to see, has been discussed fairly fully in pars. 167-176, pp. 61-65.

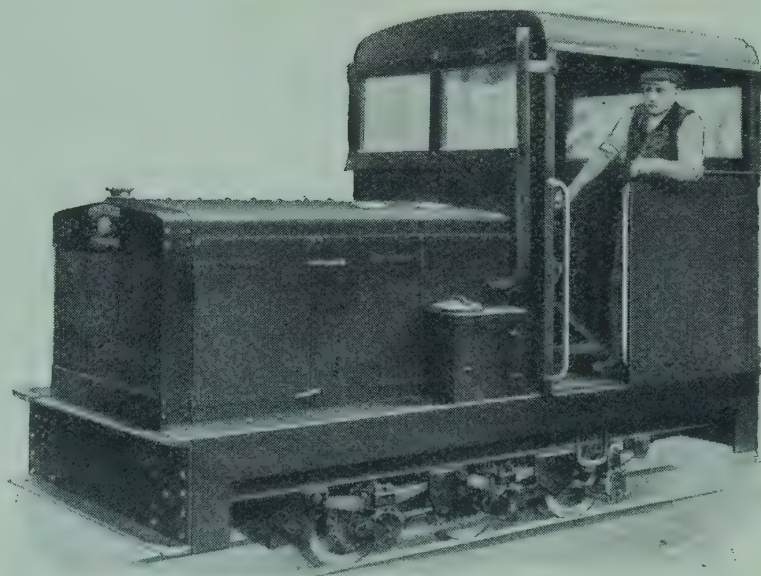
PETROL LOCOMOTIVES



DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ "
20	2½ "
20	4 "
27	5 "
50/70	10 "

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IN TOUCH WITH EVENTS

According to the Tokyo correspondent of the (London) *Morning Post* a mushroom has been discovered which, when eaten in moderate quantities, induces a happy outlook on life. This latest discovery was made by Professor Matsuura, of the Tottori Higher Agricultural School. For many years he has studied Japanese fungi and has named it *Waraitake Modoki* because of its resemblance to *Waraitake* or Laughing Fungus, which is another of the poisonous fungi known.

Professor Matsuura says that when a small quantity of the mushroom is eaten the consumer first becomes "merry," as if he had been drinking rather liberally. After this state, as with over-drinking of alcohol the consumer suffers agony, while, should he still persist in eating the delicious mushroom, he enters that state described as "panic-stricken" and which appears to resemble very closely the *delirium tremens* produced by the other variety of over-indulgence.

This new species is described as being light green in colour, while the back of the head-part or cap is purplish-brown, and the stalk is quite easily broken vertically.

The poisonous element does not affect the stomach directly, but the nerves, and the effect is seen ten minutes after eating the fungus. The particular time of the year when the fungus is found is in the rainy season of May and June, and it grows among decayed straw and leaves. Though large quantities may be found in the Tottori Prefecture, this fungus has not yet been registered in the world's book of fungi.

* * *

The Madras Agricultural Journal of the Agricultural College and Research Institute at Coimbatore, Southern India, calls attention to the paper read by Dr. Gerald J. Cox and Dr. John Metschl of the Mellon Institute of Industrial Research at Pittsburgh, U.S.A., before the members of the Sugar Division of the American Chemical Society on the value of cane sugar in strengthening mortar made from lime and sand. If this was done in the days of the Romans, as stated, one rather wondered where they drew their supplies from, as cane sugar is or was said to have been unknown to the Egyptians, Jews, Greeks

or Romans until the XIII century. Noel Deerr tells us that the soldiers of Alexander the Great were the first Europeans to see the sugar cane. This was in 327 B.C., but it did not reach Europe until about 755 A.D., when the Arab or Moor Abdur-Rahman the First introduced it to Spain. Since cane sugar is specially mentioned it could not have been honey that the Romans used.

* * *

It was the *Scientific American*, in their issue of June 1st last, which reported the meeting and the paper read; the following are extracts from same:—

"Such an application of sugar is not new," the paper claimed, "as it is believed that the Romans made use of such materials in mortars that have certainly stood the test of time. Also, in sugar-growing countries, it is known that sugar has been employed to increase the strength of mortar." (One would like to have the names here.—*Ed.* "T.L.") "Drs. Cox and Metschl found that there is very good reason for the empirical practice of 'Sweetening' mortar. From their experiments they ascertained that mortar which contains sugar equal to 6 per cent. of the quicklime content has a tensile strength 60 per cent. greater than that of mortar containing no sugar. Further tests are planned of compression strength, setting time and durability as influenced by cane sugar.

"The process of mixing the sugar with the mortar is quite simple. The sugar is dissolved in part of the gauging water and mixed in with the sand and lime. The sugar must not be mixed with the lime before slaking. The cost of using sugar in this way is not great, for with the present low price of sugar, the 5 or 6 lb. of sugar necessary for 100 lb. of lime is only a small addition to the cost of laying bricks or plastering a wall."

* * *

Australia is to be congratulated on having won against Argentina and other competitors when competing to secure the contract for the supply of frozen meat to the British Army. The total quantity to be supplied is estimated to be between fourteen to fifteen million lb.

Tonca Beans.

Where did the Name come from?

From a West Indian Reader.

IF you have nothing to do, amuse yourself (after looking up at the sky in a big town or city until a crowd collects to see what you are looking at and the police threaten to run you in for causing a serious obstruction) by asking all you dare to, to kindly tell you: (1) what tonca beans are, (2) where they get their name from, (3) where they come from, (4) what they are used for, and (5) what they are worth. If you wish to complete the cycle of queries and threats for asking such silly questions, finish up by wishing to know what *cumarin* has to do with tonca beans. If you do so, probably days will pass without you meeting anyone who can really answer such questions.

In the years that have gone since we sat for a number of hours watching men (what we called) pickling the beans in rum, we do not remember meeting with any detailed description of the bean, its trade and value until recently, when, in the *Proceedings* of the Agricultural Society of Trinidad, B.W.I., pp. 168-171 (? June issue), we found a really excellent account of how the bean is obtained in the wild state or cultivated, how it is prepared for market and what is done with it when it arrives at the various distributing centres.

Cumarin is contained in the essential oil and appears on the surface of the beans after they have been cured in rum, in the shape of crystals similar to those which appear on vanilla pods. *Cumarin*, we are told, is one of the bases of the perfumes of the world. After curing, the crystals (of *cumarin*) are to be seen on the outside of the dark, brown, narrow, wrinkled beans. It is claimed that there are two varieties of trees, one bearing a smaller pod or fruit than the other, and the beans, i.e., the seed of the fruit, of this, the smaller variety, fetch the best prices. The beans come from Venezuela, where the trees grow wild, to be "cured" in the good, reliable British rum of Trinidad, which in turn exports the "finished article" in very varying quantities. The cured bean has a pleasant smell, and is largely used by tobacco manufacturers (one takes it, after the *cumarin* crystals have been removed), to give a flavour to tobacco. Sometimes it is used as a substitute for vanilla beans. When supplies from Venezuela are scarce, values run high; as much as \$5 per lb. (U.S. gold) is said to have been paid, but on the other hand, when supplies are heavy prices are light, below \$1 a lb. As in one year under 60,000 lb. have been handled and the very next year 633,245 lb. were exported, it is easy to realize how extremes in values come and go.

Increasing quantities are being cultivated in

Trinidad itself. Those who want details of the methods employed to do so, must send a shilling, or its equivalent, to the Secretary, The Agricultural Society, Port of Spain, Trinidad, B.W.I., and ask for a copy of the issue containing the article on the subject by Mr. Thomas I. Potter, F.Z.S., the Secretary of the Society, for we have not touched even the fringe of the matter in these few lines. We are not told, however, where the name is derived from, except that it does not come from Tonquin, nor do the beans.

"One of the main topics of discussion practically throughout the world," the *Central European Observer* of August 19th starts by saying, "is whether, at the present moment, the protracted economic and financial depression has reached rock bottom and whether there are not signs of a recovery for the near future."

Elsewhere, the same exchange tells us that the unemployment figure in Germany at the end of July was 5,393,000, or 99,000 less than at the end of June, also that Polish engineering works have received a contract from Soviet Russia for the supply of twenty locomotives and eighty passenger cars. One wonders rather how such an order will be financed.

* * *

The *Journal* of the Institute of Hygiene (London) for August, writes as follows:—

"Mr. W. J. Elliot, Director of the National Society for the Prevention of Cruelty to Children, in a letter to *The Times*, refers to a matter which we have often emphasized, viz., the danger of permitting infants to lie on their backs in the full glare of the sun with no protection for their eyes. We endorse Mr. Elliot's suggestion that a canopy should be provided, or else the perambulator moved from time to time, so that whilst the benefit of the sun is experienced, the infant's eyes remain shaded."

The same contemporary also tells us, quoting Professor W. R. Hodgkinson, that:—

"I have found that syringing with a moderately strong solution of sodium phosphate, removes all kinds of annoying creatures from plants without any injury to the plant, and is at the same time not dangerous, as all kinds of arsenical preparations may be."

* * *

Those who want to buy at bargain prices whilst the price of the finest sisal is at £17 a ton or less, should note that the well-known Kibwezi, Masongoleni, N'dula and N'darugu estates in Kenya are on the market. We understand that several enquiries from quarters likely to make firm offers have been received, but decisions have yet to be reached. Further details supplied if available.

Locusts—Cuss or Cure.

Vacuum Cleaning the Tropics.

A Heated Brain Wave.

CONTINUED spells of great heat—especially throughout areas where such blessings or plagues, according to the taste of the individuals concerned are infrequent and irregular—are conducive of feelings of great idleness and of the wish for others to do any sort of work where strenuous effort is called for, rather than yourself. This being the case as the barometer, on August 18th, is reported to have left 90 degrees behind, one can be excused for dreaming heavenly dreams of clearing East Africa and elsewhere of locusts without any effort of the much-needed official (to come) i.e., the Director for the destruction of locusts, flyers or hoppers. Here is an ideal occupation for some men we all know, provided the chosen one has acquired all the knowledge possible concerning air-currents, suction by forced draughts, flying, &c. With such knowledge tucked away in his brain we have been assured by a visitor who “blew in” to see us, knowing that our office caught the breeze and was on the shady side of the house, that all the said official has to do is to lay on his back in some shady place in order to watch the air-craft when locusts are reported to be on the way, and direct his fleet of vacuum-cleaners from where he is reclining. Quick flyers (machines) go a little way on ahead and, meeting the locusts, by means of forced air draughts outward, drive them into as compact a line as possible (like shepherds when the sheep have to go through a narrow defile) so that the vacuum cleaning machines, or suction exterminators, following behind can draw in as many million, or let us say thousands, of the pests as possible and pass them on into some rear chamber containing noxious gases which shall at once kill them. Meanwhile the advance machines will have turned and, catching up the locusts again, once more pack them up for another clear-up by suction exterminators which have either come up from behind or by a fresh lot arriving from the front having recently come up from below where they have been unloading what should be the corpses of their catch which are promptly burned in case any survive. Think it out; all is quite easy. One man who knows everything, laying on his back and many more who know much, manoeuvring round to pack up and catch the “flyers.” As for the hoppers that is child’s play, a matter of ordinary vacuum-cleaning with large mouths, long but narrow and small necks, a line of them (the necks) at the top of one long mouth. A stationary balloon could do that work easily. After the first time, you would not need a Director to lie on his back, and run the risk of being hopped upon. Think also what a fine receptacle the balloon would be to hold the hoppers. Why on earth have not the Government officials adopted such a plan? Poor things, they work so hard on their

feet, “I said feet not seats,” that they have no time to think such ideas out. All the same I tell you that *suction machinery in one form or another, will be in general use in ten if not in five years’ time*, for the removal both of pests, insect and fungoid (vacuum clean your cocoa trees with a suitably shaped—possibly a rubber—mouthpiece and witch broom disease would go like the wind sucking it up), as well as some crops, coffee in particular. In this case the sucking pressure would have to be adjusted to a nicety, strong enough to remove the ripe cherries but not the others. Something of the sort has been tried with cotton, but . . .

The barometer here touched 99 degrees and both the *Editor*, not to say the entire editorial staff, slumbered out of politeness to their visitor and so details of the vacuum cotton picker are still lacking unless some kindly reader can fill it for us.

We, in America, writes one of the fibre tribe over there, have always felt that you put out a most interesting and valuable publication in that book of yours on “Sisal.” There is no doubt that the book you have published, covering as it does preparation for market as well as production, is without question the most authoritative work that has yet made its appearance on the subject.

* * *

And yet, almost on the same day that we received the above all the way from America, our Editor in London, who as a rule receives notices to attend the meetings of the Sisal Sub-Committee of the London Chamber of Commerce, was left out of the invitations to attend one of the more important meetings held of late. The excuse given was that, although he has been a member of the Chamber for some thirty years, those responsible for sending out the notices did not trouble to include him as time was short and he was *only* a representative of the Press. Even if he was, as the very wide-awake editor of *East Africa* was invited and attended, surely that makes the omission all the worse—almost an insult to ourselves. As possibly no one at those meetings has been used to “talk sisal” as long as our Editor, one begins to understand why such caustic remarks have been made in the past at the way the meetings have been arranged. With sisal as it is to-day, we should have thought the British industry needed all the friends it could get, but evidently we are wrong. Beyond all this we were of opinion that Mr. Hamel-Smith had been invited to join the sub-committee as a member of the Chamber who has, for long years, been interested in sisal, but the secretary of the sub-committee told us, not too courteously over the ‘phone, “Oh dear no, certainly not, you come merely as a representative of the Press.” So we will leave it there, only wondering whether the committee itself did not want us, or someone was too lazy to ‘phone or write us.

COFFEE AND SISAL.

The Question of Perfect Drying for Economy and Quality.

To the Editor of "TROPICAL LIFE."

DEAR SIR,—Your several letters on the above products, previous and subsequent to the writer's interview with you a few weeks ago, have been of very great interest.

We consider that the application of improved machinery in the treatment and preparation of both coffee and sisal is of paramount importance, and every opportunity should be taken to encourage discussion and increase interest in this problem.

One of the more pressing sections under this heading is that of *Artificial Drying*, as success in this direction means the maintenance of a factory output, regular both in quantity and quality, in spite of climatic conditions which may be subject to constant local variations.

In both coffee and sisal, successful artificial drying calls for two different and yet complementary systems—namely, the applications of centrifugal force and heat respectively.

The latter may be adopted without the former, but only by the application of considerably more heat, which may not only prove costly, but also defeat the chief aim of the factory manager, i.e., the production of a consistently good and even quality of coffee or sisal, whilst, in other words, a preliminary treatment of centrifugal separation will remove all free surface moisture, and permit of the final drying in a comparatively low and safe temperature.

Coffee.

When the writer was in Brazil last year, he found the recognized system for drying the coffee to be that of spreading the parchment coffee in the open on large drying grounds, and, while this system involves no extensive outlay of capital, it is open to several criticisms.

Labour costs are very considerable, even with a low-paid native staff. The absence of the sun for several days at a time—and this is not by any means infrequent even in the tropics—delays the drying very considerably, and reduces the rate of output through the factory. The shortage of water during the picking season is a very serious question on many estates, and this is accentuated considerably by sun drying, as the coffee, when it leaves the pulping plant, is saturated with water, all of which evaporates.

The introduction, therefore, of either partial or complete artificial drying, deserves the serious attention of all coffee estates. Partial drying is carried out in a Centrifuge, whereby all free surface moisture is removed, and the final or complete drying can then be carried out either in the sun or by a low temperature dryer.

A final drying off in the open air demands the

considerable labour costs referred to above, but the time required will be comparatively short. The installation of a low temperature dryer will be found to justify the initial capital outlay, and the maintenance of such a machine will be very small, provided the right type is obtained.

There are several designs on the market, and the coffee planter will be well advised to put out inquiries, which will stimulate the engineer to meet his requirements and improve the design.

One of the best-known and respected names in the Coffee Plant Industry is that of Ugarte, and his latest design of dryer embodies very many improvements, which have increased not only the efficiency, but also the simplicity of the working parts—to the benefit of the coffee planter.

Coffee has come through a very difficult time, and is still under considerable financial stress, but the return to prosperity is not far distant, and a sensible and practical anticipation of same is an immediate necessity in the factory no less than in the field.

Sisal.

This product presents a similar problem with minor variations. Artificial drying will ensure the steady output of a standard quality in spite of climatic conditions or variations. The material does not lend itself to the same easy charging and discharging, either through the centrifugal or the final dryer, but a different design of machine in both cases admits of a satisfactory output with the minimum of labour costs.

Sisal as it comes from the decorticators requires not merely drying, but also washing, and this latter treatment can be done very thoroughly in the centrifugal, but with the application of water while the machine is running—just as is done in the case of sugar and other chemicals.

The presence of vegetable acids may demand the use of copper or other non-ferrous material in the manufacture of the machine, but this is no longer a difficulty to the manufacturer, and the small additional cost is more than compensated for by the increased life of the machine, and the absence of stain on the fibres.

There are more than fifty standard types of centrifugal dryers now available on the market, so that every planter, whether in coffee or sisal, can obtain a machine of size and design to suit his own special output and power unit.

The above remarks are offered only as an introductory to a very important problem, but it is hoped that sufficient interest will be expressed on the subject to warrant further articles and data being given in answer to inquiries from planters.

Yours, &c., "COFFEA BRASILIENSIS."

PALM AND OTHER OILS—PART II.

Malaya and Nigeria.

“ONE of the striking features of agriculture in Malaya is the remarkably small quantity of fertilizers, natural or artificial, employed for the major crops, rubber, coconuts, rice, and oil palms,” so says, and very truly says, the *Malayan Agricultural Journal* for March (Vol. XX, No. 3, price 50 cts., or about 1s. 3d. post free). To this list we could add many other crops and crop-producing centres, especially coffee and cacao, but then what is the good until the makers and shippers of fertilizers can see their way to run a common fund between themselves to educate by means of suitable propaganda the users—that should be to place the use of fertilizers at its proper value along lines similar to those given by us in the Stockfarming section of our June issue. The raising and feeding of stock is of course only one of many uses to which fertilizers should be put. The feeding of crops is equally important and, as everybody knows, the opening words of this paragraph are only too true. Having correctly diagnosed the case let us work together to find out a certain remedy, not to benefit the stock and the crops, for they will take their medicine right enough if given to them. What we all have to learn is how to induce the owners of the stock and the crops to see that the right medicine is applied as and when required.

Having called our attention to the trouble the “M.A.J.” then goes on to give some excellent tips on the best way to deal with coconuts and oil-palms. In their own language they tell you that: “In this article or report it is proposed to give an account of the experiments in progress with coconuts and oil-palms, leaving to a future date the statistical treatment of results and justification of the lay-out adopted.”

Attention is first drawn to the difficulty of securing accurate and useful information as to how such crops respond to treatment, and full explanation is given why this is so, then we are told: “Considering the lengthy period of coconut cultivation in the tropics, the absence of reliable experiments on the effects of manuring and cultivation is truly surprising. In addition, the few recorded experiments refer to coconuts growing on soils which are considerably lighter in texture than those on which the palms are commonly found in Malaya. It is doubtless due to this factor that, as a rule, manuring is conspicuously absent from local practice, our heavy coastal soils being much richer in plant nutrients than, for example, the light coconut soils of Ceylon.”

Diagrams are then given of the lay-out adopted by those estates which had agreed to assist in the experimental work to be carried out, and, with

coconuts, when the complete fertilizer was used it was made up as follows:—

Whale Guano Compound	2½ lb per tree
Steamed Bone Meal	4 “ “ “
Muriate of Potash	1½ “ “ “

This mixture, it is reckoned, supplies Nitrogen (N) 12, Phosphoric Acid (P_2O_5) 44, and Potash (K_2O) 36 lb. per acre.

The use of lime is also discussed, but as we cannot give the details in full we must leave our readers to study the original.

Oil Palms.

Unlike coconuts, oil palms, we are told, are found in Malaya chiefly on inland soils which are frequently poor in nutrients, and in view of the considerable demands made by the crop response to manuring is more likely to be attained than is the case with coconuts. Full details covering two or three pages are given of the mixtures used and the results obtained. It would take too much space, however, for us to offer any useful comment when quoting tables in full and it would be no good to discuss the mixtures without giving the tables.

Firms, however, who specialize in tropical fertilizers are reminded that Malaya is fortunate in having considerable home supplies to draw upon. Christmas Island, noted for its phosphates, is part of Malaya and the centre of an important trade in rock phosphates mined in the island. These phosphates (of lime) are exported and are chiefly employed in the manufacture of superphosphate. In 1930 nearly 120,000 tons were exported, mostly to Japan and Australia.

Then again, in several parts of Malaya, notably in Perlis, near Ipoh, Perak, also near Kuala Lumpur, bat guano deposits occur in the caves of the limestone hills. This guano is largely used by padi growers but some is exported. As this demand has been going on for many years the original deposits must have been enormous. Penang, on the other hand, imported guanoses from Siam until the government of that country, for some reason, stopped the export.

The Annual Report of the Department of Agriculture for the F.M.S. for 1930 speaks of 3,253 tons of palm-oil and 486 tons of kernels as having been produced in that year, and says that the experimental factory at Serdang Plantation was equipped with a Krupp press. This will enable comparative work to be undertaken on the two methods of extracting palm-oil that are at present practised. Finally we are told (p. 9 of the report) that some 45,250 acres are devoted to oil-palm cultivation made up as follows:—

	ACRES	ACRES	ACRES	ACRES
Perak	2,541	1,881	7,958	12,380
Selangor	11,271	—	1,781	13,052
Negri Sembilan	600	—	302	902
Pahang	—	—	787	787
Johore	5,063	7,500	5,563	18,126
Total	19,475	9,381	16,391	45,247

It may be remembered that in a separate report on "Oil-palm in Nigeria," issued in 1924 with a brick-red coloured cover, we were told on p. 5 that palm-oil consists of glycerine and fatty acids in combination. The oil is liable to decomposition by which these two parts are separated and then the glycerine, being soluble in water, gets lost and the proportion of fatty acids in the oil is consequently increased. A high content of free fatty acid, generally known as f.f.a., is generally associated with some degree of rancidity. Palm-oil can be extracted practically free from f.f.a. (i.e., containing less than 5 per cent. f.f.a.), but the soft oil, as prepared for export by the ordinary soft-oil process, usually contains from 15 per cent. to 20 per cent. f.f.a., whilst others contain as high as 35 to 50 per cent. f.f.a. The native soft-oil process can be easily reproduced by machinery, and when this is done there is no difficulty in preparing oil which is quite sufficiently free from f.f.a. to be used for

margarine making. The fact, therefore, that out-of-date land laws are preventing Nigeria from obtaining factories equipped with such machinery is bound to cause other centres supplied with the machines to leave Nigeria far behind in quality and costs. Thus, our engineers will continue to lose valuable orders for plant and machinery parts that West Africa would call for if given wise land laws and factories.

(To be continued.)

Malayan Statistics, 1932 issue, should interest many people. Compiled by Mr. C. S. Alexander, late Financial Adviser, F.M.S., copies can be obtained from the Malayan Information Agency at 57, Charing Cross, S.W.1, 178 pp., free of cost. Herein you find the annual statistics up to the latest dates for which they are available, say 1930, but some of the returns for rubber and tin go into 1931. Area and population, external trade, agriculture, railways and currency, etc., each and all are spread out before you in full; that is to say, the statistics concerning such matters are. The dollar in which values are expressed is, of course, the Straits Settlements dollar of 2s. 4d., fixed at that value in 1906. This works out at \$60 to £7.



Was America named after a Bristol Man?

"I was much interested," writes a "Constant Reader," "in what you had to say about Bristol in the concluding paragraph of p. 150 ('Our Friend') in the August issue. It is a pity you could not have included a reference to what I consider to be one of the most extraordinarily detailed accounts of a city, compressed into a paper to be read at a public gathering. I am referring to the paper read by Colonel E. W. Lennard before the Fellows of the Bristol Branch of the Royal Empire Society on January 6th last. Colonel Lennard is, I believe, a brother of your 'Friend' in August and, in any case, he is Chairman of the General Purposes Committee and also a member of the Council of the Bristol Branch. In the course of his remarks, I remember, he challenged the statement that America was named after Amerigo Vespucci. This is how the Colonel expressed his views on the matter.

"I must not leave the discovery of America without referring to what is at least an interesting local theory and formed the subject of a paper read at the Clifton Antiquarian Club by the late Mr. A. E. Hudd, F.S.A., in 1908, and reprinted in the *Western Daily Press* of Bristol of August 7th, 1929.

"In 1907 the Customs Roll of the Port of Bristol for 1496 to 1499 was discovered at

Westminster Abbey. This showed two payments of £20 each to John Cabot, and was held to establish the fact of his return to Bristol after the voyage of 1498. These payments appear to have been actually made by the senior Collector of Customs, one Richard Ameryk, who, incidentally, was Sheriff of Bristol in 1503 immediately prior to Robert Thorne. Both Mr. Hudd and Mr. Edward Scott, M.A., who, at the time was Keeper of MSS. in the British Museum, suggested that John Cabot named the new-found territory after the Bristol citizen (and probable friend) to whom he had to look for the payment of his own monetary reward. The paper referred to went on to quote the lost but recorded Fust MS. ("The Precursors of Jacques Cartier," Biggar, p. 194) as evidence that the name America was used in Bristol immediately following the discovery, and many years before its appearance upon any Continental map or its association with Amerigo Vespucci, who is referred to as a comparatively obscure ship Chandler. Richard Ameryk's name is commemorated upon a brass covering his daughter's tomb in Saint Mary Redcliffe."

As Colonel Lennard duly observed, such a contention is a fascinating one, one that should be remembered and followed up when possible.

Where Men Work.

The Imperial College of Agriculture, Trinidad.

The annual report of the Principal of the Imperial College of Tropical Agriculture for 1930-31, came to hand some little time back and merits attention—also congratulations and thanks to all concerned on the work done. It is pleasant to see very few changes in the names of the principal members of the staff. Rolling stones may not gather any moss, but, alas, permanent posts do not carry increased annual increments in academic circles as often as one would like to see them do. For selfish reasons alone, therefore, one must confess to deriving pleasure from seeing the names of Mr. Geoffrey Evans and many of his colleagues still on the list. There have of course been some changes, and this is referred to in the concluding paragraphs of the report as follows:—

“I cannot conclude my report without making special reference to the College Staff. The members have shown exceptional devotion to their duties and great loyalty in circumstances which, owing to the existing depression, have been admittedly somewhat difficult. I wish particularly to include the administrative officers, since revisions in the budget and similar matters have necessarily resulted in a considerable addition to their work and responsibilities.

“As usual the College was inspected by a large number of visitors, and, at certain times of the year, looking after them and conducting them round the buildings, etc., was no small undertaking. Visitors from the United Kingdom included, among others, Lord and Lady Olivier, Sir Edward and Lady Davson and Sir Sydney Armitage-Smith of His Majesty's Treasury, and His Excellency Sir Thomas Best, Governor of the Windward Islands. An increasing interest was shown by Canadians, and among the numerous visitors from the Dominion may be mentioned the Right Hon. Sir George and Lady Perley, and Sir Robert Falconer, the Vice-President of Toronto University, and Lady Falconer. Major R. L. Wheeler, the Fruit Transportation Research officer of the Dominion Agricultural Department, also stayed some time at the College. Many prominent Americans came as well, and laboratory accommodation was afforded for a short time for Messrs. W. W. Bowen, Clark and Roberts, who were concluding bird studies on behalf of the Academy of Natural Science, Philadelphia. Similarly, Messrs. Cooley and Kisliuk of the Bureau of Agriculture, Washington, D.C., who were making studies of Fruit Flies in this area, were afforded facilities. An increasing interest in the College was taken by the neighbouring Republics in the Caribbean area and many distinguished visitors were received.

“It is interesting to read that past students of the Imperial College of Tropical Agriculture are now employed in the following parts of the British Empire: India, the Union of South Africa, Swaziland, Southern Rhodesia, Northern Rhodesia, Nyasaland, Tanganyika, Zanzibar, Uganda, Kenya, the Seychelles, Nigeria, Gold Coast, Gambia, Sierra Leone, the Anglo-Egyptian Sudan, Ceylon, Malaya, Iraq, British Guiana, Barbados, Bermuda, Jamaica, Trinidad, British Honduras, the Windward Islands, the Leeward Islands and the Solomon Islands.”

One wonders how many are at work outside the Empire, and where.

Messrs. Francisco Mantero, Ltd., the well-known colonial shippers and cacao firm of Lisbon (Rua de S. Nicolau, 26) have “blossomed forth” considerably in their monthly reports. Now they send a large folded sheet showing imports, exports, Home consumption and stocks month by month for the current year and two previous ones. Below this is another table giving the shipments for three years of the five leading firms and “All Others”; also (which is quite an innovation) the ten or eleven centres receiving the cocoa of those firms since the beginning of the current year, the whole concluding with a carefully worded review of the cocoa market which, in the July report ends by saying: “Buyers would be well advised to cover their requirements and be courageous enough to abandon for a while their hand-to-mouth policy which may turn against them in the same way as it has helped them during the last five years’ “Bear” market.

An inquiry just received is for the name of makers of machinery for working mangrove bark, either to break it up entirely or reduce it to lumps of material as used for the manufacture of the well-known tanning product.

The International Cotton Bulletin of Manchester (238, Royal Exchange) for July (vol. x, 4, No. 40) included a full report of the meeting of the Joint Egyptian Cotton Committee, which was held under the auspices of the International Cotton Federation at the Belsfield Hotel, Windermere, in July. A photo-group of those present is included, and the report covers pp. 525-37. Mr. William Howarth, President of the I.C.F., was unfortunately absent owing to illness, but those present included Dr. Lawrence Balls, F.R.S., and Mr. Arno Pearse, the expert adviser of the I.C.F.

TEA RESEARCH IN CEYLON.

Remarks on the "Witches Broom" Disease.

BULLETIN No. 8 of The Tea Research Institute of Ceylon is devoted to the Report of the work done during 1931. It reminds us, in the first place, that Dr. W. Youngman, D.Sc., Ph.D., is the Director of Agriculture, and Mr. R. G. Coombe is chairman of the Board of Management of the Institute, with Dr. Norris as Director.

Working backwards in the report, Dr. Gadd tells us that the shelving accommodation of the library was originally arranged to take 1,100 volumes. This has proved to be insufficient and a further stack of shelves to hold 800 volumes has been added, and will our readers please note the last paragraph of all which runs: "The Institute would be glad to receive any copies of books, even if old ones, pamphlets or photographs of historical or scientific interest dealing with tea culture and preparation for market." By the way, we are asked to state that applications for the Institute's Bulletins and other publications should be made direct to the Secretary at Victoria Commemoration Buildings, Kandy, and not to St. Coombs.

We take it that Witch Broom disease of cacao and the Witches Broom disease of tea are one and the same trouble. In that case our cacao friends should be at least interested in the following extract from the Ceylon report, even if not of direct use to them, for comparison with what is being done for cacao. The following will be found on p. 17 of the report:—

"*Witches Broom Disease*.—Little progress has been made in elucidating the cause of the 'Witches Broom' disease of tea. Attempts to induce the disease in healthy plants by grafting, and by pruning them with a knife previously used to prune diseased bushes have proved unsuccessful.

"It seems probable that symptoms of the 'Witches Broom' disease may result from any cause which interferes with the normal nutritional processes of the bush. Some of the above-ground symptoms of the "Bitten off" disease resulting from alkaline soil conditions resemble closely those of witches broom, and in some cases unsuitable soil reaction may be a contributing factor in the causation of the latter disease. The disease, however, also occurs in soils of suitable reaction.

"Recently a bush was observed to be attacked by the *Poria* root disease which also showed characteristic symptoms of the 'Witches Broom' disease. Such symptoms are very unusual where an active parasite is involved; but in this case, owing to climatic or other conditions, the active parasite had progressed very

slowly but had sufficiently interfered with the normal activities of the roots without entirely killing them, that above-ground symptoms had been allowed to develop. Bushes in the vicinity showed no 'Witches Broom' symptoms. It is unusual, however, to find any parasitic organism on the roots of 'Witches Broom' bushes. These usually appear healthy though deficient of smaller feeding roots.

"Viewed from this aspect it would appear that a deficiency of an essential nutrient substance (usually other than nitrogen, phosphoric acid and potash), or the presence in minute quantities of some substance toxic to tea, or even any unsuitable mechanical or physical properties of the soil may lead to symptoms similar to those of 'Witches Broom.' This might account for some of the difficulties experienced in the investigations concerning the causation of this disease, viz., that although the symptoms are similar, the causation may be different in different cases. Whether this be true or not, the investigations of this division indicate that the cause is not a parasitic organism and the disease cannot readily be transmitted as would be the case were it a virus."

To-day the public are demanding small baby grand pianos, and British manufacturers have captured the market at home and, no doubt, abroad, by producing these at a lower cost and of a higher quality than was possible ten years ago. If only these makers would advertise the fact that they can turn out pianos suitable for tropical climates and equally cheap in proportion to those received from elsewhere, what a trade would be done in them! Until, however, our readers are taught to realise that British pianos are the best and cheapest no real trade can be looked for. Dwellers in the tropics, who are generally born pianists, have so long believed that no instrument made outside France or Germany is worthy of consideration, that it is necessary to show them in black and white, in Spanish as well as in the English language, how times have changed and why they must "Buy British" so far as pianos are concerned.

If maize is stoked at harvest time, the stooks must not be made large enough to prevent adequate aeration and drying out in the centre of the stooks. Finally, no planter should attempt to grow maize on a bigger acreage than he can plough, plant and generally "handle" adequately and at the right time with the labour, power and implements that he has at his disposal.

How the Philippines got Theodore Roosevelt, Jnr.

"Princess" Alice's Diplomacy—Then and Now.

THE London *Evening Standard* of August 22nd tells the following story of Mrs. Alice Longworth, the brilliant daughter of a sturdy father, ex-President Roosevelt.

"Mrs. Alice Roosevelt Longworth, daughter of the late President Theodore Roosevelt, and America's only 'Princess,' as they used to call her when she was a dashing débutante at the White House, has resumed her quiet but potent role in national politics.

"It is rumoured that she is being used by the Republican Party chiefs to persuade her reluctant brother, Theodore Roosevelt, Junior, to return from his post as Governor of the Philippine Islands in order to assist President Hoover's campaign.

"The Republicans are worried because the Democratic candidate is named Roosevelt, the most famous name in America, and fear that many misinformed voters will ballot for him, thinking he is a member of the Republican branch of the family. Hence, they believe that it would be well to have one of the Roosevelts campaigning for President Hoover.

"Several weeks ago a high Republican official sent Young Roosevelt a cable asking him to come home and aid his party's national campaign. Roosevelt replied that he was deep in work and did not want to come. This answer was referred to 'Princess Alice.'

"What Mrs. Longworth may have written to him is not known, but the other day another cable was received from Young Teddy, showing that his resistance to the move was weakening. Almost on the same day Mr. Hoover designated Mr. John Holliday, Mr. Roosevelt's legal assistant, as Vice-Governor of the Philippines, a post that has been vacant months.

"This has paved the way for Mr. Roosevelt's return. No official announcement has been made, but it is believed that he will soon be here to help Mr. Hoover.

"If Mrs. Longworth is responsible for persuading her brother to return she is repaying a debt that she owes Mr. Hoover. According to Washington gossip the President promised Mr. Roosevelt, Junior, the Philippine appointment while he was in Porto Rico. Then when the post became vacant he changed his mind.

"Young 'Teddy,' learning that he had lost favour with Mr. Hoover, is reported to have appealed to his sister, who took up the fight and won him his assignment to the Philippines."

Sisal.

"Are we down-hearted at the price of sisal?" Jamaica asked her growers. The answer was "No; if others cannot make use of our fibres at a fair price, we can," and they did so as follows:—

"The world markets for fibre have been so poor that it has not been possible in Jamaica to produce sisal fibre at the price obtainable abroad. Fortunately the local rope market, with some assistance from a scientific tariff, has enabled a fair proportion of the local fibre to be utilized at a profit. The native sisal rope is found to be excellent and has almost displaced the imported article in the smaller sizes, which are generally used for roping donkeys and drays and on cattle pens."—Extract from the 1931 report of the (Jamaica) Department of Agriculture.

(Continued from p. 170).

(pp. 322 to 334). Doubtless, however, in the same way that it is felt the perfection of to-day, lilies or decorticators, should be improved out of existence as time goes by, so we feel that when the next book, dealing with the sisal industry from 1928, where we leave off, is published, the first thing the buyers or users of sisal decorticators will turn to, will be those pages dealing with improvements introduced since the date where we stop.

"In order fully and properly to study the needs of the planters from year to year," Mr. Guenther would tell you, "I have travelled far, perhaps over all those parts of the world of use to and in need of the engineer and his mechanical aids, certainly there are very few sisal producing centres I have not visited, and the first fibre factory I erected, called by many a sisal factory, was in Somaliland for *Sansevieria*. Whether it could be or was adapted for sisal I cannot say, but happening to cross the path of the followers of the Mad Mullah, when they were extra excited, the plant was destroyed by them.

"I was very pleased, in fact I can say I was much gratified, at the interest shown in, and the approval of the Corona decorticators on show at the first World Fibre Congress, which took place in Soerabaya in 1911, since when we have by no means stood still in our efforts to make the machine even more useful. I have represented my firm at a number of exhibitions and always been well received; that of Allahabad in 1910, perhaps being the most impressed on my mind for several reasons. Now all this is passed history, I have, as I believe you say in England sometimes, earned my feed of corn without working for it, but all the same although I shall, no doubt, go slow, I shall never lose my interest in the machinery and engineering world, especially in connection with the tropics and colonies."



"Tropical Life" Friend.

No. 327.

Mr. C. E. GUENTHER.

Tropical Machinery Expert.

WITH the retirement of "Our Friend" this month at the still youthful age (in these days) of 72, we are glad to be able to pull aside the curtain and give our readers some idea of another expert who has, more or less, been coaching us up in our work since TROPICAL LIFE started in 1905. We have always been fortunate with our guides, thanks very largely to the International Congress of Tropical Agronomists (the first of its kind) which was held in Paris immediately before this paper started. Here we foregathered and became known to one another.

In sugar we have, and still have, it is pleasant to report, Dr. Prinsen Geerligs, of Holland, and Mr. Noel Deerr, now in India. These two, the leading sugar experts of the world, have often set us right when we would have gone wrong. Mr. Norman Rodger and Mr. James P. Ogilvie, of London, although running the *International Sugar Journal*, have been equally helpful to us in London. With cocoa, on the scientific side, we have been equally fortunate, ending up with Mr. A. W. Knapp, of Messrs. Cadbury Bros., Ltd., and Mr. Robert Whympers, when he was attached to Messrs. Peek, Frean and Co., Ltd., on the manufacturing side, and Messrs. Baker, Perkins, for machinery. With vegetable oils, coffee, cotton, and tea, we have always found guides, and, considering the fact that there was in those days no Imperial College of Tropical Agriculture to start with, it has been astonishing at times how much information we have been able to pick up.

Coming to sisal and fibres, as stated in our book on "Sisal," we can almost claim to have studied these in the nursery for discussions as to the machinery available, of the engineering firms ready to make any machine you like (if you could pay for it), for India or elsewhere, were dinned into our ears, always willing and anxious to learn, from the earliest times. Consequently, when the late Mr. H. J. Boeken, knowing the interest we took in fibre extracting machinery, used to call in at the old Fenchurch Street office to discuss his latest invention or improvement, although no technical expert, there were many points that we could discuss, and did so, little realizing how prominent sisal machinery was to become in ten, and especially in twenty, years time.

When the firm of Krupp took over Boeken's decorticator, which, we believe, but are not quite sure, was before the inventor ceased to call on us in London, then our training, unknown to us, must have passed to "Our Friend" this month for he pointed out, "I got into touch with TROPICAL LIFE at the beginning of 1909 when I started to specialize in the designing and preparation of machinery for the colonial and tropical markets; in some ways great changes have come and gone during that period. It is difficult to say which branch of machinery has shown the greatest advance. If one had to be named, probably sugar machinery would be mentioned. With sisal many improvements and changes helpful to the planters have been introduced in the original decorticators, and whilst still claiming that *his* machine was perfect in his days, Mr. Boeken would, I feel sure, were he still with us, be the first to acknowledge the advantages of the changes made."

One more year would have enabled Mr. Guenther to have claimed a half-century connection with the firm of Krupp Grusonwerk at Magdeburg, and every account we have had from there has spoken of the valuable and reliable nature of his work as a constructing, technical or advisory engineer. Of that period he spent ten years in connection with engineering at Kalgoorlie, Australia, during which time he dealt principally with gold-ore dressing plant in connection with which he introduced several important improvements, which have since been generally accepted by experts in all branches of the gold-mining industries.

In 1909, "Our Friend" "struck" sisal and set to work (no doubt in friend Boeken's mind) to "paint the lily." Having thoroughly studied the machines then being turned out, Mr. Guenther gradually evolved that which—not to hurt anyone's feelings—can be described as transforming the lily bulb of Boeken's day into the fully matured Krupp "Corona" decorticator of the moment. Those who have carefully studied "Sisal—Production and Preparation," will have read the detailed description of the latest machine (in 1928) then on the market

(Concluded on p. 169).

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All communications relative to Advertisers' Announcements must be addressed to the Advertisement Department, "Tropical Life," Oxford House, Great Titchfield Street, London, W.1. Telephone :—Museum 2077.

Tropical Life.

SEPTEMBER, 1932.

The Awakening of Latin America.

What of Brazil as a Start?

IN these days of half per cent. returns on money against a 5s. income-tax and other equally preposterous levies for the benefit of those other than the payer, there is no doubt that the possibility of a life, free from such unfair burdens, spent in tropical and sub-tropical countries, makes an irresistible appeal to the young men of this country, not only on account of its freedom and naturalness but also because many of these countries, given the right type of men to "handle" them, offer excellent prospects of securing a livelihood on more remunerative lines than can be looked for over here.

The various units of the British Empire naturally have great claims in this respect but at the same time they do not offer all the attractive possibilities of some countries outside the Empire, added to which they impose at times laws regarding land and labour supplies, restrictions and quotas that are provocatively irksome to newcomers or prospective settlers.

The South American Republics, especially those bordering on the Atlantic, with Africa its great rival in several ways, smiling at it across the water, possesses resources of illimitable, because of unknown value; resources, the surface of which has barely been scratched in many places. These areas in such instances can well be termed practically undiscovered so far as their mineral, agricultural and other forms of wealth are concerned, although their coast-lines occupy a central position along the chief highways of modern trade routes.

The extensive littoral of Brazil, Uruguay and the Argentine with their numerous and important rivers and waterways, afford splendid facilities for establishing large centres of population. Thus, with Brazil, Japan, who has for years passed been busy in that direction, will reap great trade and other advantages on account of Brazil needing such centres in the first place, and then being able to support new townships, which must inevitably arise with the commercial development of the Republics; a most important factor, one that rightly entitles them to be termed, "The Countries of To-morrow." And all must agree that, if Brazil to-day has the accommodation for such settlements, Japan certainly has the people to fill them.* All this will not be long in coming, for how often has TROPICAL LIFE, to go no further, claimed that this, the XXth

* See TROPICAL LIFE for May, 1931, and what Warren Thompson (U.S.A.) has to say concerning the Japanese in his book, "Danger Spots in the World's Population." 21s. Knopf, London and New York.

Century, is, or will be, the Century for Latin America.

Once the start is made nothing can hinder the development of such areas, both producing centres on the one hand, and, through that, as markets calling for machinery and manufactured goods on the other, an exchange trade in which the U.K. and the British Empire are anxious to participate knowing that they are well able to supply all that is needed.

Generally speaking, comparatively little is known throughout the U.K. and her Dominions, concerning South America and what is known is too often only sufficient to cause misunderstandings on both sides. Present world needs and (temporary) measures, must not be confused with the normal progressive and generally attractive policies, so far as foreign trade is concerned, of these Southern Governments and Brazil, to take but one of several cases, bids fair, in spite of her upheavals, to be one of the first of the Republics or possibly of any country, to emerge from to-day's world-wide economic crisis. For some time past much more progress has been taking place throughout Brazil than is generally recognized, and those who have knowledge and energy, are seizing the present opportunity, whilst things generally are under a cloud, to anticipate the wave of prosperity which, sooner rather than later, is bound to come to that country.

(To be continued.)

The "Hudson"-isation of Africa.

From a Correspondent on the Spot.

To the Editor of TROPICAL LIFE.

DEAR SIR,—I have always been greatly interested in the advertisements of Messrs Robert Hudson, Ltd., of Leeds, knowing something of what they have done out this way. Their advert. with you is rather on the mingy side, but some of the papers, large in size, carry full-page illustrated descriptions of the firm's activities (and hopes of more to come) and also a list of their various branches and agencies which, perhaps, interest me the most for the reason that I was mixed up with the following important and lengthy transaction, showing how the firm is entirely self-supporting so far as one can judge:—

During a periodical visit to Central Africa I encountered one of the firm's directors who had recently booked a large order for light railway plant and wagons for use in a mine in the interior, and became associated with the job. The wagons, as you would know, came from the Hudson Works at Gildersome, near Leeds, and were shipped to their own warehouses at Luanda by a Line for which Hudsons are agents. On arrival they were sent up country by rail, a

distance of about 650 kilometres over the Luanda Railway—for which, by the way, I believe Messrs. Hudsons supplied nearly £1,000,000 worth of British railway track, wagons, and locomotives, etc., to the Portuguese Colonial Government—and then sped on their way for the rest of the journey, some 950 kilometres, by Motor Transport Service supplied by Hudsons. A smart and efficient piece of work all through.

Trade in these times is very difficult to obtain, but, as you would say, there are more ways of killing a cat than by choking it with butter, so the firm of Hudson seems to have found ways to overcome all difficulties for, among other things, they are always ready to barter where exchange difficulties stand in the way of cash. In Angola, for instance, they have sold or are selling their supplies and receive payment in the local currency with which they buy local produce, coffee, palm-oil, beeswax, and so on. These are shipped to the best markets at the moment and so turned into cash or its equivalent. Skill and enterprise in this direction are bound to tell, and I am sure that scores of their workpeople would be out of employment were it not for the "go" and the skill of those at the head of affairs.

At the moment I am watching the progress of their latest move, one they made, I believe, in order to cope with the various developments of protective tariffs by establishing their own branch engineering works in South Africa and India. By these means they will be able to supply local requirements promptly at comparatively low costs, and to offer their services when needed after the sales have been made and the supplies are in use. This satisfies a need that is truly essential under modern conditions, so is the ability when a start is to be made of being able to advise customers on the spot as to the most suitable equipment for their individual needs. All this the firm can do and is doing.

Good Luck to T.L. and yourself.

"En Route." "TROPICAL ENGINEER."

4 July, 1932.

"It is at least worthy of note," writes Mr. E. E. Austin, Keeper of Entomology, in the *Natural History Magazine*, just published by the Trustees of the British Museum, "that in the blood of the migratory birds known as swifts in Italy, organisms similar to those which in tropical Africa cause sleeping sickness in man and 'nagana' in domestic animals have been found.

"Whatever may be the case with regard to swifts, that the insects can convey any form of disease to human beings is practically beyond the bounds of possibility. Still, it may be worthy of remark that should these flies become separated from their natural hosts and their nests and enter the living rooms of houses, they may attack their inmates. The bite is said to feel something like that of a midge."

Are Retailers Exploiting the Public?

OTTAWA, on the top of the change in our fiscal policy, has caused Protection to be generally received in this country; those who are against it being fairly quiet for the most part. Unless, however, the Protectionist "fans" can find some way to check the tongues of the tradesmen and to see that they do not exploit and mislead the general public in the quality and price of what they sell them, we feel that the Free Traders will come up top again at no very distant date, impossible as such things may seem to-day. It must be remembered that the majority of housewives and their husbands as a rule take what is given them, especially in the fruit line, and, with the exception of a mild protest, go home dissatisfied but rebellious. When one is charged twopence for a lemon worth a penny or, at the best, over-dear at three ha'pence, and told that the price has been advanced because of the increased duty on fruit and everything non-British, those now in power must not be surprised when the sheep-like voter, too lazy or too limp to be useful politically, simply votes dead against the party in power, because they are in power owing to the overcharges and lies he and she meet with from day to day. Such things those at the head of affairs cannot possibly know of. We mention this matter of the penny—now twopenny—lemon, because we can guarantee the truth of the story, and feel sure that similar pin-pricks against protecting home industries are being dealt out all round every hour of the day. Meanwhile the wage-earner is being made to pay more and is growing restive, since he or she feels there is no need for the increased prices or poorer qualities.

In the East African Press an article is advertized called Sisalkraft, described as a paper of remarkable strength and as being at the same time waterproof and clean, very suitable for many purposes in buildings, etc. A few such uses—and advertisements—ought to help disperse surplus supplies of sisal, especially if the attempts to use that fibre for bags and bale-covers also prove successful, as we sincerely hope they will.

Two inquiries this month, both placed. One was for machinery or appliances for working up coconut fibre, and the other, a Spanish inquiry, for a small machine for making up cacao beans.

More than once we have been assured that the production and preparation of cotton for market grows simpler every day. Having studied the following extract from a review we have our doubts. Describing the machines to be studied at the Fibre Research Institute in Holland, we are told that "machines for the examination of fibres include the Balls' sorter, Kraiss dynamometer, Schopper conditioning apparatus, and Leitz microprojection apparatus; for the examination of yarns, the Goodbrandlea tester, Schopper dynamometers, Tarnagrocki dynamometer; for testing strong yarns of long fibres such as Manila and sisal, de Vooy's ballistic tester and Schopper twist tester; and for the examination of fabrics, Schopper dynamometers, the Buskop tester, a folding test apparatus due to de Vooy, apparatus for determining the permeability of fabrics to air, a 'hammer apparatus' for testing filter cloths, and a Hanau quartz-mercury lamp." The names in some cases are not of a "chummy" nature; we wonder what the machines are like, what they cost, and how long they last with care.

MARKET REPORTS, GOSSIP AND PRICES.

THE Bank rate in London, as will be seen at the end of all these reports, remains at 2 per cent. in spite of all the talk, when money was, as it is, a drug on the (money) market, of having it lowered to $1\frac{1}{2}$ per cent. One wonders, apart from other reasons, how this can be done since banks, one feels, must on principle allow something on the huge sums now lying idly on deposit. Having come down to $\frac{1}{2}$ per cent. with a Bank rate of 2 per cent., what would happen if the Bank rate fell to $1\frac{1}{2}$ per cent., especially as the rate on Treasury Bills fell below 10s. ($\frac{1}{2}$ per cent.) on August 5th, when 9s. 11.05d. was the actual quotation.

Thinking of Ottawa and all the other Conferences which, to the man-in-the-street and the ordinary business man, have meant or are likely to mean nothing. How can they be ex-

pected to turn out otherwise when, like the Israelites of old, those set to work to build up national and international agreements have not the equivalent either of straw or bricks to work on. Every country knows what it wants and why, with fairness and reason, it wants such things. Up to now, however, the old, inflexible law of book-keeping, i.e., to credit one account another must be debited, holds good equally with the most important Conference. So far, practically everyone calls out for credits, but when granted no one seems willing to be debited. "Why should we?" they clamour, and as no one can say why (except that we must be debited as a neighbour wishes to be credited), no final agreements are arrived at. We are thinking nationally and internationally no doubt, but that law of credit and debit, of demand and

supply, rises Frankenstein-like in the way, and so far Frankenstein has won. "The Ottawa Conference," claims the August *Review* of the Westminster Bank, "stands out as a further effort, among nations already united by intangible ties of kinship and ideals, to secure the highest degree of practical economic solidarity," yet in one section, Russia and her dumping will alone prevent our being able to claim that Ottawa has done any good in proportion to what was expected of it. "Within a few months," again quoting the *Review*, "a World Economic Conference will meet, possibly hampered by restrictions of its sphere of action through national susceptibilities (i.e., lack of straw through jealousies and bricks through national selfishness or self-guarding of interests—*Ed. T.L.*"), but powerfully assisted, as none of its predecessors have been, by a lively appreciation of realities born of a common danger."

Having expressed our views as above, we take up the paper again and learn with joy and high hopes that a high Canadian authority claims that the abrogation of the U.K. treaty with the Soviet which was signed in London in April, 1930, will follow on the adoption of the U.K.-Canadian agreement. Given that, then we will be ready to agree that Ottawa has, at least, done some good, good that we can realize. The others, like Prof. Piccard's voyage towards the moon, we can only accept on the authority of scientists as having been worthy of their cost. Stupefied by the way in which over-taxation continues, relentlessly, to empty our pockets, and under-consumption on all sides, equally relentlessly, refuses to allow them to fill up again, we ordinary mortals have neither the time nor money to pursue such studies even to the fringe of such knowledge as would enable us to appreciate their values ourselves.

Moving on to our usual market gossip, we come to:—

Cotton.

THE Empire Cotton Growing *Review* for July (vol. ix, No. 3, P. S. King & Son, Ltd., 14, Gt. Smith St., London, S.W.1. Price 1s., or 5s. post free for the four annual issues) starts with the fourth and fifth instalments on "The Improvement of Cotton Production," by Mr. Albert Howard, the well-known (former) Agricultural Adviser in India. The Cotton Specialist of Nyasaland, Mr. H. C. Duckers, follows with an article on cotton in that Protectorate. Professor Todd's statistics are useful, and much can be learned from the concluding 37 or 38 pages, i.e., "Notes on Current Literature, and Publications received." They are packed with information. We would specially mention para. 407, "Development in Plant Genetics," and para. 412, "Fertility in Hybrids between New and Old

World Cottons." We still claim, as we have always done since we first studied cotton hybrids, that perfection in cotton, especially when great strength in the cloth is required will be evolved from the tree and bush cottons of the Amazon region, i.e., the tree cottons of Peru and the bush cottons of the lower altitudes. We hope one day to come across reports on these cottons on such a basis.

Coming to market news, our good friend *Cotton* of Manchester has described their market in clear and easy language in the following paragraphs, the first written on August 12th and the second on August 19th:

"The feature of interest in the market during the week has been the rise in values as a result of the bullish crop statistics published by the American Government. It has been necessary for all spinners and manufacturers to revise their quotations in an upward direction. This development has stimulated inquiry and in certain quarters rather more business has been done, but numerous buyers have come up in price rather slowly and differences between quotations and offers have been too wide to be bridged. Some difference of opinion prevails as to whether the dearer rates are justified, but it must be admitted that crop advices from the States are far from satisfactory and there is a tendency at the moment for commodity values generally to harden." (August 12th.)

"Prices throughout the market have continued to go against buyers in sympathy with the further rise in raw material rates. The upward movement in values has been too rapid for many of our customers to follow and although a considerable inquiry has been dealt with a large part of the demand has not been of a practicable character. Producers and distributors of goods, however, have derived benefit from the appreciation in the value of stocks, and it is believed in many quarters that if prices would steady at about the present level a more extensive business could be done. On the other hand, there is a fear in some directions that a reaction may occur in cotton rates." (August 19th.)

The American market seems to think President Hoover might have helped them "some" in his nomination speech and has not done so. A slight reaction against the recent rise (in America) is reported but, at the same time, it is felt that production estimates may have to be further reduced. "Bears" speak of actual consumers as having overbought, "Bulls" of consumption having overtaken supplies, and current values should be maintained, subject probably to fluctuations.

With regard to prices, the following were the official "Spot" prices in Liverpool on August 19th and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5.76*	5.51*	3.64*	6.49*	6.63†
Strict Middling American	5.86*	5.61*	3.79*	6.69*	6.81†
Fair Pernam	5.91	5.66	3.69	5.69	6.66
F.G.F. Sakel. Egyptian	8.00	7.80	5.50	10.85	9.45§
Fine Broach	5.45	5.22	3.13	4.25	6 N
Fine No. 1 Oomra	5.16	4.97	2.96	3.75	5.3
Fine Bengal	4.81	4.67	2.81	3.45	5.3

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.
§ Egyptian Brown.

Coffee.

A LETTER has been received since our last appearance from the Director of Agriculture at Nairobi, correcting the opening paragraph of our coffee market report in the May issue as follows:—

"I note in the paragraph headed 'Coffee' of page 96 of your May issue that the output of coffee from 99,440 acres in Kenya is assessed at 1½ cwt. per acre. The Crop Report for February, 1932, forecasted a crop for the current season of 159,295 cwt., which was a decrease of 1,440 cwt. on the estimate of the previous month, and not from the previous year. The crop from the previous year was recorded in the annual census at 250,919 cwt. from 96,689 acres, which is equivalent to 2.6 cwt. per acre.

"It may be mentioned that of the total acreage under coffee in this Colony approximately one-half only has reached the full bearing stage and one quarter is less than three years old."

"The high-grade Blue Mountain Coffee," we are told in the 1931 report of the Agricultural Society for Jamaica, "has kept its trade and maintained its high price. The ordinary and lower qualities of Jamaica coffee have suffered through the gigantic over-production of Brazilian kinds, of which there are reported to be sufficient for the whole world for three years stored in one port alone. Coffee producers in Jamaica are now looking eagerly to the Mother Country to give them help in this difficult crisis and to foster the consumption of Empire-grown coffee in the United Kingdom. Whereas the coffee exported in 1930 was about 500 tons, that in 1931 was less than 400 tons in quantity. A good coffee crop is expected for the coming year."

The Tea and Coffee Trade Journal for July has some wise remarks in it, tersely put. "Propaganda hopes, built upon the idea that new customers may be made by giving away tea and coffee are likely to come a cropper" is one of them; here is another: "Before prohibition became a certainty, the wise ones urged that it would help the sale of tea and coffee. Well it didn't." Two statements are also to be noted. One refers to Mr. Berent Friele, who looks like a college student but who is described as being the largest buyer of coffee in the world. As president of the American Coffee Corporation, which

buys coffee for 16,000 stores, Mr. Friele purchased about 1,700,000 bags of coffee last year, estimated to work out around 225,000,000 lb., and the other statement explains why the United American coffee trade runs a better chance of being a success.

Recently we have been reading complaints of the falling off in the consumption of pretty nearly every beverage, intoxicants and otherwise. One day it is wines and ale or beer, another day tea, cocoa or coffee. Can all of these be losing ground together? The reports do not say that, but, in nearly all cases so far as we can remember, the reason given for the falling off in the demand of each individual beverage could easily cover all, viz., steadily increased taxation, already over-heavy, and decreased purchasing power of the general public. But with coffee, has the demand gone back so far as one is led to believe? Is it not rather that the output tends to increase more rapidly than consumption. According to the American official figures the world's production of coffee in 1930 amounted to just over 25,300,000 bags (132 lb. each) against 23,781,000 in 1929, and an average output of 22,885,000 bags during the five years 1924-1928. As we all know, Brazil has been the chief offender, with 15,288,000 bags in 1930 against 14,281,000 in 1929 and 14,091,000 as the five years' average in 1924-1928. Against this the Republic of Colombia has increased her output from 774,000 bags as the average for the five years 1909-1913 to 2,841,700 in 1929 and 3,179,600 bags in 1930. Meanwhile consumption has moved up for seventeen countries from 1,205,472 tons (1,000 kos.) in 1924 (U.S., France, and Germany alone 858,409 tons) to 1,289,606 tons in 1929 (U.S., France, and Germany 988,234 tons) and 1,406,614 tons in 1930, to which the three chief countries contributed 1,055,209 tons, Germany having called for 153,802 tons against 147,584 in 1929 and 55,310 tons only in 1924, whilst her average annual consumption during the five years before the war, i.e., 1909-1913, was 181,194 tons per annum. Here alone is a falling off and a big one, to be made up, but then it is the same (in Germany) with cocoa and other commodities.

Coming to prices, sales in London have been very small of late, even if you take a fortnight's instead of a week's auctions. For what they are worth, they include the following:—

Jamaica. No. 1, 200s. to 213s.; No. 2, 160s. to 183s. 6d.; No. 3, 123s. to 156s.; 4's 110s.; 5's 109s.; Peaberry 148s. to 187s.

Kenya. Bold fair to good greyish and greenish 66s. to 85s. 6d.; bold fair greenish 71s. to 76s.; seconds 60s. to 70s.; smalls 56s. to 66s.; peaberry 55s. to 91s.

Tanganyika. Good bold greyish and greenish 67s.; bold greenish 67s.; seconds 55s. to 59s.; smalls 50s. to 55s.; peaberry 60s. to 70s.

Rubber.

One of our readers, just arrived from Stratford-on-Avon, could not say hard things enough about the ugly outlines of the Memorial Theatre at Stratford; we believed he compared it to Rima in Hyde Park and several recent additions to architectural sculpture in London. On the other hand he could not say nice enough things about the comfort of the seats inside and put this down to the cushions being made of sponge or froth rubber, he was told by the Dunlop Company who had an article in the *Rubber Age*, he believed, of June last. In any case the seating of the theatre met with unalloyed approval. Will other theatres, buses, trams, railways, etc., please note and follow suit.

The *India Rubber World* of New York for August has, tucked away at the end of p. 43, a useful note on the advantage, after other methods of plantings fail, of going back to forestry methods when planting rubber. One can only conjecture what is meant by that term, for we are not told. We are told, however, very plainly that forestry methods pay best in these days of cheap rubber. This is how our New York contemporary puts his case:—

“The great majority of European growers have virtually coddled rubber as if it were an orchard tree; native growers have proved that they can supply more rubber per acre and at a lower cost by regarding the Hevea as a forest product and treating it in a quite irrational manner as compared with European culture.

“The few European concerns that have become convinced that forestry methods afford the most feasible means for combating the production and merchandising practices of the natives give much credit for advocating the return to more primitive ways of raising rubber to Dr. H. N. Whitford, of the Rubber Manufacturers Association of America. The doctor, an expert in forestry, has made a long, exhaustive study of rubber growing and is not only satisfied that forest methods can be readily substituted for the orchard system, but that in view of the fact that rubber is likely long to remain cheap, such methods must be adopted in self defence by Europeans if they would reduce their costs so low as to discourage the natives from glutting the market with cheap rubber.”

This sounds reasonable, may it prove to be practical.

The same paper attracted us with its illustration of a rubber boat with outboard motor which, we are told, was developed by the New York Rubber Corp., Beacon, N.Y. The motor is attached by a wood and aluminium bracket laced to the boat pontoons, in a cradle-shaped, 2-sleeve pocket made of pontoon fabric. The motor weighs 34 pounds. Speed approximates 10 m.p.h.

On July 31st the stocks and afloats of rubber in America ran into 383,821 tons, against 388,881 at the end of June and 301,695 tons at the end of July, 1931. The American consumption in July was 28,272 tons, against 39,116 in June and 31,937 tons in July, 1931. Moving on to prices, these are returned by Messrs. Lloyd, Matheson & Carritt as having been as follows:—

SPOT QUOTATIONS—	1932		1932		1932		1931	
	AUG. 17TH		AUG. 10TH		AUG. 3RD		AUG. 19TH	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	2 $\frac{7}{16}$	0	2 $\frac{9}{16}$	0	2 $\frac{1}{8}$	0	2 $\frac{5}{16}$
Crepe (F.A.Q.)	0	2 $\frac{1}{16}$	0	2 $\frac{3}{16}$	0	2 $\frac{9}{16}$	0	2 $\frac{7}{16}$

FORWARD POSITIONS—	AUG. 17TH		AUG. 10TH	
	SMOKED SHEET	CREPE	SMOKED SHEET	CREPE
	s.	d.	s.	d.
1932, August	0	2 $\frac{7}{16}$	0	2 $\frac{3}{16}$
„ September	0	2 $\frac{7}{16}$	0	2 $\frac{1}{8}$
„ October/December	0	2 $\frac{1}{8}$	0	2 $\frac{1}{8}$
1933, January/March	0	2 $\frac{9}{16}$	0	2 $\frac{1}{8}$
„ April/June	0	2 $\frac{3}{8}$	0	2 $\frac{1}{16}$

STOCKS—	1932		1931	
	TONS		TONS	
London, Week ending Aug. 13th	47,713		82,171	
Liverpool „ „	57,762		54,906	
Total	105,475		137,077	

SINGAPORE QUOTATIONS—

Aug. 17th.—Spot, 7 $\frac{1}{16}$ cents; October/December, 1932, 7 $\frac{1}{8}$ cents; January/March, 1933, 8 cents.

Aug. 10th.—Spot, 7 $\frac{1}{16}$ cents; October/December, 1932, 7 $\frac{1}{8}$ cents; January/March, 1933, 7 $\frac{5}{16}$ cents.

Since the above dates prices have risen to 3d. and over.

Balata.

This market continues on the quiet side with quotations around 1s. 5d. to 1s. 5 $\frac{1}{2}$ d. c.i.f. for Dutch subject to duty, against 1s. 8d. c.i.f. for British free of duty. The spot price quoted at the moment for the British being the same (1s. 8d.). Venezuelan block on the spot is put at 10d., against 9d. c.i.f. nom. Panama, spot 11d. to 1s. and Iquitos 3d. to 4d. per lb., both nominal.

Vegetable Oils (London and Liverpool).

Reports from Liverpool speak of the palm-oil market as being steady but slow, evidently sellers feel that consumers should buy more and need less coaxing. Values mentioned include Lagos at £17 15s.; softs £17; mediums £17 12s. 6d.; red Sherbro £17 per ton, sellers' values, September-October shipment. For October-November £17 5s. is asked for softs.

Coming to cake, consumers are beginning to “kick” against the higher prices asked; all the same, £8 5s. to £8 10s. per ton is still asked for linseed cake, English make, against £7 5s. to £7 15s. (sales made) for imported. Imported cotton cake, as Egyptian, seems easier up to £4 15s. ex ship, but London made being in limited supply is firm at £5 17s. 6d. to £6. Groundnut cake ex-store can be bought at £7 10s.

or a little more, but future supplies will be dearer, at least so say importers.

With regard to other products we will start as usual with:—

COPRA PER TON.

	CEYLON			JAVA			STRAITS			PHILIPPINES			SOUTH SEAS		
	F.M.S.			F.M.S.			F.M.S.			F.M.S.			F.M.S.		
Aug.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
24	15	7	6	14	10	0	14	7	6	13	12	6	13	17	6
20	15	7	6	14	10	0	14	7	6	13	12	6	13	17	6
17	15	5	0	14	10	0	14	7	6	13	12	6	13	15	0
13	15	5	0	14	10	0	14	7	6	13	12	6	13	15	0
10	15	0	0	14	7	6	14	5	0	13	10	0	13	10	0

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation f.m.s. on Aug. 24th £14.

COCONUT OIL PER TON.

Ceylon mill oil on August 24th was quoted at £27 per ton for spot parcels against £23 (cylinders) for August-September. English deodorized in barrels is worth £34 10s. against £34 a month ago.

OTHER OILS PER TON.

	CASTOR			GROUNDNUT			COTTONSEED			LINSEED			SOYA BEAN			PALM		
	FIRSTS			CRUDE*			EGYPT			SPOT†			SPOT, NAKED			KERNEL OIL‡		
Aug.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
24	36	10		33	15		23	0		16	0	0	23	0	0	22	10	
20	36	10		33	15		23	0		15	10	0	23	0	0	22	10	
17	36	10		33	15		22	10		15	10	0	22	15	0	22	10	
13	36	10		33	15		22	10		15	10	0	22	15	0	22	10	
10	36	10		33	5		22	0		15	0	0	21	15	0	22	10	

Soya-bean Oil. Oriental to the Continent, Sept./Octr. £21 15s. in bulk, per ton.

* Crushed, naked. † Net, naked, ex-mill. ‡ At Hull.

SEEDS PER TON.

	LINSEED (AT HULL)			COTTONSEED			SOYA BEAN		
	CALCUTTA			EGYPT			GROUND- NUTS		
	LA PLATA			BLACK			BOMBAY		
Aug.	£	s.	d.	£	s.	d.	£	s.	d.
24	10	12	6	8	12	6	7	5	0
20	10	15	0	8	11	3	7	7	6
17	10	15	0	8	7	6	7	13	9
13	10	10	0	8	7	6	7	11	3
10	10	10	0	8	5	0	7	6	3

Desiccated Coconut.

This article is practically unaltered with a quiet market at the time of writing. On the spot, fine is quoted 24s. and medium 23s., whilst, for August-September shipment, sellers are offering at 21s. 6d. per cwt. c.i.f.

Other Products.

The same as was reported a month ago, the tea market on the whole has had nothing to complain of in the way of prices at the recent auctions. Indian kinds are considered to have had a very good market for the good to finer qualities, which realized firmer rates when any change was made. Ceylons did well for fine teas, about steady for common, but weak to lower for mediums, which seem to have been held back in the past and now are in over supply. Values for Java and Sumatra remained unchanged.

Moving on to fibres we come to Jute, which seems to have done much better since our last reports, as more than one pressure to sell and a definite drop at one time of 17s. 6d. still left prices on August 20th at £18 to £18 2s. 6d. for new crop, and £17 17s. 6d. for old, against £14 13s. 9d. for old and £15 2s. 6d. for new last

month. Moving on to Manila fibre, with all our anxiety to see British sisal used on British (and all other) ships, one cannot but be glad that sisal has not as yet the further disadvantage to contend against which is troubling Manila fibre, viz., the slump in the shipping trade with an enormous tonnage of craft tying idle and therefore not calling for ropes, &c. Despite this poor trade, however, Wigglesworth & Co., Ltd., tell us, prices for Manila fibre show advances of from 20s. to 60s. per ton although the business is small, but then supplies also must be lower, receipts at Manila being only 519,500 bales, against 729,000 at the same period last year. Against this, the world's tonnage of vessels has fallen heavily, the American mercantile marine, as an example, being now put at 10,800,000 tons, as compared with 14,700,000 ten years ago. From other sources the price of Manila fibre is put at £16 5s. for K grade, against J2 at £19 and M1 now worth £14 15s. With East African sisal the price of No. 1 grade is put at £16 5s. sellers, and £16 buyers, with September-November placed at £16 2s. 6d. c.i.f. with buyers over. This spurt in demand is said to be due to large orders for binder twine for the exceptionally good grain crops in Canada and the U.S.A. Mexican sisal is also said to have risen with negotiations for a big parcel—about 150,000 bales—in progress.

Shellac on the spot is steady with TN at 66s., Fine Orange 70s. to 125s., AC Garnet 75s., RLI button 77s. 6d. per cwt, against 56s., 65s. to 130s., 60s. and 67s. 6d. respectively the month before.

Palm kernels seem to be dull at £10 15s. c.i.f. to Hamburg, against £10 8s. 9d. and £10 2s. 6d. in July and June. Coming to metals, Tin is reported to have improved in price recently, offers being reserved and advices firmer from the East. Standard cash is now quoted at £149 12s. against £125 in July and about £10 less in June. Copper seems to have risen from its bed of sickness and to be in comparatively good spirits, thanks to a better demand and no one pressing sales. Standard cash is now put at £33 10s., against quite £10 less a month ago.

Coming to finance, we have no changes to report in Bank rates, so again quote New York, Paris, and Amsterdam 2½ per cent.; the Swiss Banks 2 per cent.; Brussels 3½ per cent.; Milan and Berlin 5 per cent. Bar silver is quoted 18½d., showing a goodly rise, whilst gold is put 3s. dearer than last month at 118s. 11d. This makes our table work out as under:—

AUGUST 24TH	1932	1931	1930
Bank rate	2 per cent.	4½ per cent.	3 per cent.
Consols 2½ per cent	70½	57½	55½
Bar silver per oz.	18½	12½	16½
Exch. on New York	\$3.46½	\$4.86	\$4.87½

Financiers will remember that in the U.K. the present National Government came into being on August 24th, 1931, and the country went off the Gold Standard on September 21st.

THE WORLD'S COCOA MARKET.

The Tragedy of Ecuador.

BY THE CONTROLLING EDITOR.

WE have had so much to discuss of late that such matters, important as they are, as prices, movements, near future prospects, have been pushed aside. With prices perhaps, their absence mattered the least since they have shown little or no change, although at times fluctuations in New York, made market men "sit up," but not for long. It was as if a red ant nipped them in their sleep, but they soon went back slumbering again, at least most of them did. This was when, as Nortz & Co. reported, an order for over a thousand tons for September delivery was placed during the first week in July and caused prices for September to jump up some 20 points or more, giving "shorts" an uncomfortable hour. It seemed to have soon passed, and now, for this and other deals, both "shorts" and "longs" have to see what September holds in store for them. Buyers perhaps would be wise to cover their needs at present prices, which are still low, while nowhere do holders seem anxious sellers, and this being so prices should improve. Whether you are buyer or seller, producer or middleman, speculator or buyer for consumption, no one can say for certain whether the "shorts" will be caught and have to buy against a market in no hurry to sell or whether they prove too elusive to be pinched, and so prices, instead of firming-up go lower even than now. There are undoubtedly buyers, or should-be buyers, who cannot believe that when the Accra crop comes to market that values will not go lower. For them to do so, both the Gold Coast and the Bahia crops will have to be larger than they seem likely to be, quite apart from the ever-green bogey of a hold-up, this time by both centres.

News from Ecuador.

MR. BIRCH RORER, the American expert, lent to Ecuador by Trinidad (was it not about the time that the Great War started?), spoke truly when he said that, between the Witchbroom and Monilla diseases, the Guayaquil crop would drop from 1,000,000 quintaux to one-fourth that quantity, after which, luck and science combined, might drag their output up to half the former record, i.e., to 500,000 quintaux, but as neither luck nor science seems to have come along since Rorer's time, no such improvement in their output has taken place. One fears by now that a larger proportion of the old trees have "gone west" or are truly suffering from "senile decay" owing to an overlong spell of lack of nourishment and general attention. Scientists have to be paid the same as anyone else, and as the luck has been against Ecuador's cocoa industry for so long she has been unable to find the

money for the doctor. Thus it has come about, as prophesied, that since luck and science have combined only to be absent, the glory of Ecuador's cocoa industry seems doomed to drop slowly out of sight, as no one can pretend that there are reasonable hopes for market prices to put that centre on its cocoa legs again just yet.

Figures to hand from Mr. Arnold Panse (the Ultramares Ecuador Trading Co., S.A.) go to show how the output from Guayaquil has fallen off, the only centre to compare with it being San Thomé. During the eleven half-years, Jan.-June, 1922-1932, the average receipts work out as follows: for the six years 1922-1927, 394,961 quintaux of 46 kilos each; for the five years 1928-1932, 253,720 quintaux, the average for the eleven years being 330,761 quintaux with extremes ranging from 496,883 quintaux in 1925 and 487,570 in 1922 to 209,820 quintaux in 1931 and 246,976 this half-year all, of course, being for the six months Jan.-June.

Ecuador cries out for Appreciation.

Then follows a well-worded plea for greater appreciation by the manufacturers for the better quality, not only of Guayaquil cocoa compared with other growths but also of some grades and qualities of Guayaquil cocoa compared with other grades. Bluntly speaking, their planters seem to say "Our cocoa is better than all other growths turning out equal quantities, but no one will give us a fair price on that account, they will not even give an adequate premium for fine Guayaquil over ordinary to pay for the extra care and attention that these fine cocoas demand." The complaint is summed up as follows:—

The news that the International Association of Chocolate and Cocoa Manufacturers at Brussels is drawing up a report to lay before the planters is, therefore, very welcome, especially as it will be printed in several languages, including Spanish. The rest of the paragraph is not quite clear, but it seems to urge an increase in price for cocoa in general and of 10 per cent. at least for fine Guayaquil over the more ordinary grades, so that the planters will have more money to spend over their cultivation and so be able to fight pests, diseases, &c.

The Guayaquil statistics, in quintaux, in kilos, or in values, are rather perplexing. It is not easy even to be sure how much their bags weigh, but one table to hand speaks of 147,121 bags having been shipped during the first half of 1932, of which America is down as having received 41,089, Germany 28,599, the U.K. 15,537, Holland 14,774, and France 13,263, other countries receiving from 7,300 to 10 bags (Scotland)

only. Of twelve firms responsible for the shipments, four exported 119,000 bags, leaving about 28,000 for the rest of the shippers.

America's Imports.

Leaving a former champion producer for a present-day champion consumer, one notices that according to Messrs. Marcone's table, America received much less cocoa this July than she did last year. Here are the figures for the one month and then for Jan.-July:—

ARRIVALS AT NEW YORK, BOSTON AND PHILADELPHIA.

	JULY ONLY		JAN.-JULY	
	1932 BAGS	1931 BAGS	1932 BAGS	1931 BAGS
Accra	27,358	36,821	731,879	683,712
Lagos	6,398	27,453	144,604	198,214
Ivory Coast	—	—	48,744	114,566
Bahia	18,425	65,933	495,766	293,476
Venezuela	15,270	10,059	67,503	91,244
Costa Rica	17,690	10,990	66,370	68,301
Guayaquil	6,691	3,900	44,643	40,456
Sanchez	40,662	84,499	194,509	236,232
Trinidad	7,872	15,533	57,152	141,122
Makes	140,366	255,188	1,851,170	1,867,323
All others	5,447	13,207	44,955	71,089
Totals	145,813	268,395	1,896,125	1,938,412

Writing on August 5th, Messrs. Von Dannenberg & Co., of New York, spoke of their market at the time as enjoying a moderately increasing volume of trade with better inquiries for actual cocoa, whilst the Exchange was enjoying active trading with advancing prices. This in the dullest month of the year when great heat is prevailing in many places, is distinctly encouraging, especially as it bears out reports from other centres of a better undertone with greater stability apparent. We all know that statistically the position is strong and that consumption has left production well behind, especially if undesirable parcels were eliminated. This is stale news and has been pushed on one side because, whether true or not, it has not helped the producers and shippers a bit. What has gained, is confidence in the near future, i.e., the feeling which no one troubles to analyse, that prices will improve "some" and run on a fairly even keel for some time. May it be so.

Returning to Von Dannenberg's views: when speaking of their market generally, this, they claimed, continues to advance steadily and while there has been no very material increase in buying, manufacturers have started to show more interest and even to show willingness to advance their price levels. At producing centres prices on the whole are above New York's prices and this is causing holders to be firm in their ideas. This is especially the case with African kinds, Accras and Lagos, where local quotations are causing offerings to be either negligible or to be made at levels much above those of distributing centres. Bahia and Sanchez are also

asking premium values, the latter because supplies are supposed to be short. This shortage does not appear in the Sanchez shipments during the first six months of the year, but possibly it is well known that against 18,000 tons (1,000 kilos) that were shipped last crop from June to September, supplies this season will drop off. A "bull" report is centred on the alleged smallness of the Gold Coast crop, which is considered as being likely to stop, so far as their exports are concerned, at 200,000 tons for the October-September output, since the figures for October-July total only 192,357 tons against 208,312 last season and 209,010 tons in 1929-30. There is, of course, a parrot cry on the surface by the "man-on-the-kerb" who never goes far down for his information, that there is "plenty of cocoa" about, but those who know most say nothing and this is why the bulk of us feel that the production and consumption are fairly well balanced and that what cocoa is available for purchase is in strong hands and not to be obtained by "bear" hugs. This probably is where the greatest change has come over the cocoa market of late years; the small shipper or "runner" has apparently been eliminated so that when out to buy, be it a large or small order, you come up against someone solid and it is mainly a matter of wits and of knowledge of the market as to who strikes the best bargain. In this market, at any rate, there are no parcels "in distress."

The Board of Trade Returns.

There are some who think, not without reason, that a considerable change has come about in the raw cocoa market through the elimination of the small buyer of raws. The demand for cocoa butter, now low in price it is true, causes the big manufacturer it is felt to "roast" more beans than he needs so that he gets over-supplies of block cocoa which is sold cheap to the small manufacturer to clear and so these buyers call for less raw cocoa. One of the best authorities, perhaps, at the moment, the best authority in London, who will discuss such matters, claims that this is not so. The need, even of the smallest firm to keep his machinery going, it was claimed, would cause him to buy raw cocoa to use his machines whether he augmented such supplies by additions of block cocoa or not. This being so, since suppliers and middlemen have decreased in number but (the survivors) increased in size and ability to give value for money, it may be that what sellers of small parcels of cocoa are suffering from is the tendency for these fewer suppliers to buy for the many small "roasters," which after all has the same effect on the demand and thus reduces competition.

Such discussions, so far as we know, refer to this country where, one is glad to note, the

deliveries for home consumption remain quite good and thus should not cause too much heart-burning among holders of small parcels. During the seven months January-July our deliveries for Home use were nearly 5,000 tons above those in 1931 and well over 7,000 tons more for the same eight months two years ago. How these really large quantities of cocoa are consumed many of us would like to know. Is it that, after all, the bulk goes in the shape of powder for drinking, or can it be that the raw material, made up with as much or more sugar and fillers, goes as slab or fancy chocolate, for, if the latter, what a tremendous "tonnage" must be consumed. This is easy to realize when you handle chocolate cream bars, milk chocolate with or without nuts, fancy chocolates, and so on. No matter how consumed, perhaps, so long as the consuming is good. All the same, it is the powder for drinking that "mops up" the beans. Long, therefore, may that section of the industry increase and flourish. Latterly, of course, several leading foreign firms have either started factories of their own in this country or arranged (as we always *have* wanted the West Indies to arrange) for first-class firms to turn out their "stuff" over here. All this tends to increase our Home consumption and is likely to continue to do so for some time, to the advantage of the British workers if to no one else.

During July only, the U.K. took 4,253 tons

into Home use, or 1,352 tons more than the 2,901 tons we called for last year. July, 1930, however, with 5,303 tons was well ahead of us, although we have won on the seven months' totals. This makes the figures for the seven months work out as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY-JULY—RAW COCOA ONLY.

SEVEN MONTHS JAN.-JULY	LANDED TONS	INCL. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK JUNE 30 TONS
1930	46,094	43,878	32,518	1,858	40,950
1931	53,914	50,913	34,925	2,280	44,900
1932	51,592	48,979	39,796	1,809	38,950

Dec. 2,322 Dec. 1,934 Inc. 4,871 Dec. 471 Dec. 5,950

With regard to prices and values, August can be described as closing with a firmer if not a higher market with some inquiries about. These, however, found sellers in no hurry to offer, so, naturally, more "tone" and rather higher prices are looked for based on spot values of Trinidads up to 53s. and Grenadas to 38s., against 28s. for fair Accras and 29s. 6d. for good. To arrive, G.F. Accras to the Continent seem to have moved up to 30s. 3d. for November-January, against 28s. 9d. before, but actual rates paid are not easily forthcoming. With Trinidads the latest reports speak of C.P.A. at 40s. instead of 38s. c.i.f., with offers difficult to obtain.

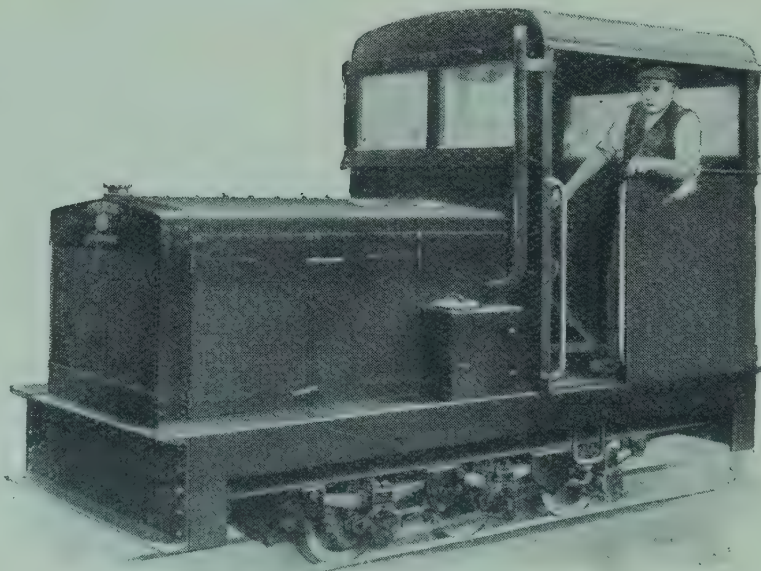
PETROL LOCOMOTIVES

SIMPLEX

DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3¼ "
20/36	2½ "
20/36	4 "
32/42	5 "
65/85	10 "

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28th YEAR. No. 328.

OCTOBER, 1932.

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IN TOUCH WITH EVENTS

What are your parcels and packages tied with? If not sisal twine—British sisal twine is best—why not?

* * *

A day or two after our September issue went to press, tin, on September 2, jumped £6 a ton, reaching £153, against the £149 we quoted in that issue.

* * *

Has any book or fairly detailed report been published on *Sansevieria* since the data given in our book, "Sisal and other Fibres"?

* * *

Sir Otto Niemeyer, the League of Nations expert, is, or was, at Bucharest studying their conditions mainly from a financial standpoint.

* * *

Austria and Turkey are stated to have arranged to exchange goods on an extensive scale under a scheme of barter.

* * *

In their issue of September 17th *West Africa* (28 Fleet Street, E.C.4) tells us on pp. 968-9 all about the New York Cocoa Exchange, "Where West Africa's Fortunes are Moulded."

* * *

The *London Morning Post* celebrated its 50,000th issue by publishing as a Supplement an extra sixteen pages giving an historical survey of people and events since the paper started in 1772. This takes us back to the seventeenth birthday of Marie Antoinette and the fifth birthday only of Queen Victoria's father the Duke of Kent and to when Maria Theresa was still living. Needless to say, piles of congratulatory messages have been sent in to the *M.P.* from the King, the Prince of Wales and others, including a most kindly one from Mr. Ramsay MacDonald, the Prime Minister, who offered them his most hearty admiration on their 160 years of publication, and whilst they draw breath to receive it, he wished them a long and vigorous life. All wise people will feel the same.

In *TROPICAL LIFE* a year or two back, we published an illustrated article on "Camels in Australia," where probably they are still to be met with. To-day, the West India Committee *Circular* is calling attention to the presence of camels in the West Indies. They do not seem to have been a success since, we are told, they have in all cases died out. Apparently they were most common about the middle to the end of the eighteenth century. In 1781 for instance, a report speaks of great numbers of camels being imported into Jamaica. A bas-relief on the pedestal of a column, part of a monument (date not given) actually shows a camel on his knees behind a man, as if resting or waiting to be loaded up.

* * *

The *Formosan Agricultural Review* of Taihoku for July (No. 308) starts with an article on primitive sugar machinery which should be interesting were one able to read Japanese, especially if, occasionally, comparisons with modern improvements are introduced. The next two articles also have to do with sugar, viz., sugar prices in Japan, and a "Study on the maturity and consistency of fallen cane."

* * *

News notes in the *Rubber Age* of New York, for August 25th, tells how their crude rubber consumption decreased and stocks increased during July. Details are given of the incorporation in Mincing Lane of the London Rubber Exchange Company, Ltd., now said to be a full-fledged rubber trading company. The Goodrich firm is said to have suffered a loss of \$710,000 during Jan.-June, whilst the Goodyear company made a net profit of \$50,500.

* * *

The same paper devotes p. 401, and part of p. 402, to an article entitled, "The Evolution of the Airwheel Tyre," by R. D. Evans, of the Goodyear Company, showing how these tyres, designed primarily to satisfy the needs of aviators, are threatening to leave even balloon tyres behind as automobile and tractor equipment. An illustration of the various sizes of these airwheels and also another of a tractor with large and small airwheel attachments pulling a twenty-four (or some such number) disc-harrow, makes one imagine that the

tyres when inflated for use, are one-third their total diameter on the wheel or hub.

* * *

The *South African Sugar Year Book and General Directory* for 1932, being the third year of its publication, has come along, and at its modest price of 5s. 6d. post free, should have a very wide circulation as a book of reference outside its own area. We have always found ours most useful. Covering 288 pages, it gives you details of all the sugar-making companies, and a directory of some hundreds of names of those interested. A really wonderful book.

* * *

We have already had occasion to make use of the *Bulletin* of the Imperial Institute (vol. xxx, No. 2, issued July, 1932) when quoting the figures it gave on p. 197 of the output of palm-oil products in Malaya. The number generally is made up of useful and timely articles, starting with "Empire Fibres for Marine Cordage," in which East African sisal figures prominently, and passes on to "The Improvement of Copra in Fiji," and "Cement-making Materials in Nyasaland," a long and carefully written report covering pp. 139-159. Then comes Mr. Freeman's paper on "Empire Fruit" and the usual Notes and Empire Produce Reports, etc., altogether a very useful number. Price 3s. 9d. post free, or 15s. annual subscription.

Quoting Mr. Freeman's paper, we are told that the question of producing grape-fruit in Sierra Leone and the Gold Coast is already receiving attention. It has to be borne in mind, however, that grape-fruit requires more care, attention and skill, particularly in handling, packing, etc. than most of the present West African products, and very careful supervision will be needed to see that the fruit is given such care.

* * *

Whilst we were busy getting ready for our October issue, one of the best, i.e., most useful and most willing to help, friends of the Tropics went to join his wife in the Great Beyond. Unlike some pioneers in research, medicine, or anything else, Sir Ronald Ross lived to see his life work a real success and now that he is no more with us, it is to be hoped that the whole world, having benefited by his discoveries, will not wait for a hundred years, as with Sir Walter Scott, to make a fuss of him, but will start "right now" and send their money to Ross Institute at Putney to help establish the most widespread and lasting monument that any man or woman can ask for, i.e., to raise a fund, say, £100,000, to endow the Institute and give it a moderate income in comparison to the work to be done by it, and on which it can depend for a bread-and-butter existence, leaving it for those who benefit the most as the years go by for a little "jam" with which to continue the work on the scale that Sir Ronald would wish.

And now, after all, he was laid to rest beside his wife, as they must have wished, and in this surely both sides have been satisfied, those who claimed a place for him in Westminster and those who claimed that the wishes of the husband should be given preference. Sir Ronald has had his wish and his admirers have found most people agree that he deserved a niche at Westminster, so what better ending to a big, useful life could be looked for?

A "Wellcome" Gold Medal for Anthropology.

Sir Henry S. Wellcome, LL.D., F.R.S., has arranged for a gold medal, to be known as the "Wellcome Gold Medal," to be offered annually, to encourage Anthropological Research.

The medal, we understand, shall be awarded annually, subject to conditions hereinafter provided, for the best research essay on the application of anthropological methods to the problems of native peoples, particularly those arising from intercourse between native peoples, or between primitive natives and civilized races.

The medal shall be open to competition among all nationalities, and shall be announced at least once annually in the publications of the Royal Anthropological Institute, the Royal Empire Society and the African Society, and finally it shall be awarded by the Royal Anthropological Institute on the recommendation of a Medical Committee, which shall consist of the President of the Royal Anthropological Institute for the time being as Chairman, the Conservator of the Wellcome Historical Medical Museum for the time being, and three members to be nominated respectively, for a period of three years, by the Presidents of the Royal Anthropological Institute, the Royal Empire Society and the African Society.

The essays must be of moderate length. They must be submitted in English, in triplicate copies, at the office of the Royal Anthropological Institute on or before the first day of January of the year in which they are to be considered by the Committee. The medals will be awarded at the annual meetings of the Royal Anthropological Institute.

The Medical Committee may appoint on any occasion a referee or referees, but no award shall be made except on the recommendation of the Medal Committee to the Council of the Royal Anthropological Institute. Provided, in any year, no essay shall have been submitted which in the opinion of the Medal Committee attains such a standard as to justify the award of the medal, no award shall be made.

No doubt there are other conditions and particulars which should be ascertained from the Secretary, Royal Anthropological Institute, 52, Upper Bedford Place, London, W.C.

THE CHOCOLATE & CONFECTIONERY EXHIBITION.

Can the Arrangements be Improved?

[SPECIALLY CONTRIBUTED.]

I VISITED the Fifth Chocolate and Confectionery Exhibition at the Empire Hall, Olympia, at South Kensington, in good company. Encountering Mr. G. G. Gianetti, the librarian of the Imperial College of Agriculture, Trinidad, he came as well, and we both agreed that all three floors of the Show, ground floor and two upper ones, offered a very bright and well laid out series of stalls. There was no crowding and the old-time tendency of the exhibition resembling endless rows of counters like those inside the large shops, with chocolates and confectionery ranged in endless and perplexing variety of rows, has given place to old Moorish forms of architecture whereby each firm's goods are stowed away within four walls, well illuminated by electric light and entrances without doors through which long streams of visitors come and go.

The exhibit whose stall seemed to be the most capacious and generally attractive was No. A9 and the same firm also attracted our attention for the same reasons before. Here were air, room, light, brightness, enough and to spare. This time they claimed to have the largest stall in the New Empire Hall and one can quite believe it was so. Chocolates were there, but what caught your eye quickest were the bright rows of bottles of sweets and Christmas Crackers. We came upon this Palace of brightness after visiting the stalls of the leading chocolate and cocoa firms, all of which we found somewhat gloomy, as we have done also before, even when lined with bright tin-foil or some metallic substance remarkably well lighted. One year a very hot spell was running its course, and I can well remember how insufferably hot these stalls were (or some of them) because of the netted-in roofings.

All these firms are old, and very old hands with the manufacture of cocoa products, and, once they are satisfied with the raw material used, they can no doubt claim with a clear conscience that their wares are "*Nonpareil*," even "*Hors Concours*," but since they condescend to come into these exhibitions, any one entirely wrapped up in the production and distribution of raw cocoa can be excused if (knowing that the money is there to pay for the ground space needed) they query in their minds whether more airy exhibits would not show the cocoa products off to better advantage than these dungeon-like fortresses in some cases. Wall yourselves by all means, using the outsides to hold attractive little alcoves showing the passer-by your many wares, but inside do give expanse in air and room if you want buyers to come by their hundreds and see your cocoa products (nearly always covered up in foil or boxes) to best advantage. True the deliveries of raw cocoa in

this country are very satisfactory, but as has been said before, in this paper or elsewhere, "Never be satisfied, even with the best." Whilst I ask no one to change without consideration and a trial or two, surely with the exhibition of cocoa products it is well to consider the above remarks and ask yourselves if they are not fair criticism. Above all, even if blocks of ice and fans are necessary—which was not the case this year—do keep the stalls cool.

Referring to the above exhibition our old friends, Messrs. Maclaren & Sons, Ltd. (well known to our rubber friends as the publishers of *The India Rubber Journal*), were again to the fore with their fifth Annual Exhibition Number of the *Confectionery Journal* (price 1s. post free), issued in honour of the Exhibition. Among the more important articles is one by Mr. W. W. Piggott, the secretary of the Cocoa Association of London, in which we are told what that body is doing to help on the propaganda proposals to push the consumption of cocoa and chocolate. Illustrated with a photograph of Mr. H. F. Methven, chairman for the year of the Association, and also of the dinner group at the annual gathering of the members, Mr. Piggott's article is bound to interest all cocoa men, raw or manufactured (the cocoa, of course, not the men), who meet it on their way. The many caricatures by Yates of leading men in the cocoa and chocolate world are amusing and very lifelike.

Sugar and Mortar.

To the Editor of TROPICAL LIFE.

SIR,—Referring to the two paragraphs on the first page of your September issue with details of the effects of mixing sugar with mortar, the proportion of sugar used and how it made or makes the mortar harder and stronger, this is the first I have heard of such a thing, but I remember being told and also of having read in the papers devoted to the building trade how sugar, if added to cement, and I think also to mortar, renders it less liable to be affected by frost. I do not remember any mention of the quantity of sugar used nor the exact effect on the cement, but the impression that remains even to this day is that if sugar were added to the cement when making tiles, or for other purposes in which the finished articles are to be exposed to frost, whether they would be less liable to fracture and break during periods of severe cold. If any of your friends have had experience in this way and let you know the results, I would be glad if you can pass the information on to me.

Yours truly,

EX-CLERK OF THE WORKS
(In many Climates and Countries).

Coffee in Trinidad.

THE *Proceedings* of the Agricultural Society of Trinidad in its June issue included a useful paper on Coffee, read by Mr. Horace Rapsey, a member of the Society, who started by saying:—

At present we are faced with a very serious problem—we may have to find a substitute crop for cocoa. On the steep and rocky slopes of the Northern Range where arable cultivation is impossible, the most obvious substitute is coffee. The quality is very fair and though not comparable with the Blue Mountain, Costa Rica and best Kenya—it comes about half way between these and Brazil.

With sowing, the seeds should be selected from the best bearing trees and pulped. Where no pulper is available this can be achieved by dancing and washing. The seeds thus obtained (after the nursery area has been cleared) should be pressed lightly into the ground along lines about one foot apart and at eight inches distance in the line, the whole area being then covered with banana leaves till germination starts, when the cover should be removed. That should be in about a month to six weeks from the sowing of the seed. This method, though slightly more expensive than scattering, pays in the end as there are definite rows up which the weeder can walk when the nursery has to be weeded.

When the young plants have reached the height of about 18 inches they should be removed to the field. In removing the plants, turn them out with a fork and shake off the earth, place them in bundles of fifty, and immediately wrap them in a piece of wet sacking from which they should only be removed one at a time for planting. This I have found very important, as quite a short period of exposure to sun or wind will make the loss of plants in the field very heavy—as much as 90%.

Planting distance should be about 8 ft. \times 8 ft., if the plants are to be grown by themselves. If inter-planted one coffee tree should be put between every four cocoa trees, i.e. 12 ft. \times 12 ft. Each young plant should be marked by a stake, one of "red rayo" being the most useful as it grows, and facilitates the finding of the young plants, which should be ring weeded for the first two years, always before the field is cutlassed.

Pulping is the process by which the outer skin of the coffee is removed before fermentation or drying. This is a wet process and requires a considerable amount of water. There are two types of pulpers—the disc and the drum. The drum pulper apparently is more adaptable to small sizes, though the disc pulper is more efficient where large quantities of coffee have to be handled. The pulpers I have were the smallest pulpers at the time I got them that could be bought. Since that time the makers have produced a very much smaller pulper at about one-third of the price. In

my type the makers claim that the machine can pulp from 400 to 600 lb. of cherry coffee per hour. This is well within their capacity, as the largest amount I have been able to put through mine was 5,880 lb. of cherry coffee in 9 hours, or 650 lb. per hour.

Now we come to fermentation: After leaving the pulper the coffee passes to the fermentation and washing tanks, of which I have had models made as the most simple method of describing them, as I will now do. At the end of the day's pulping, the coffee in the fermentation tanks is covered with banana leaves or sacks, all the water is run off from the tank, and the coffee is left to ferment. At the beginning of the crop it may be necessary to ferment for 48 hours or longer; but as the tanks become impregnated with the necessary bacteria fermentation will be reduced to 24 hours. When the coffee enters the fermentation tanks it is very slimy, but when properly fermented, it should be rough and gritty to the touch. At the end of fermentation the tanks should be filled with water and well stirred. All coffee that floats should be removed. This is important, as diseased beans are light and float and are thus easily got rid of. After skimming, the beans should be stirred for about half an hour to get rid of any gum adhering. Then the water is run off and the beans transferred to the drying house.

A large quantity of water is necessary to operate these machines; working at full capacity about 3,000 gallons a day being necessary. This supply can be used four or five times, if water is short—that would mean about 600 gallons a day at a minimum.

Water should always be supplied by gravity where possible. This is usually possible in the Northern Range in Trinidad at a moderate cost. If this is found to be impracticable, the cheapest method of pumping is with a hydraulic ram where running water is available. If pumping by hand from a pond or well is necessary, provided the lift is under 25 feet, a Diaphragm pump is the most efficient. If the lift is greater some type of lift and force pump will be necessary.

Judging by the folder just to hand the 1932 Christmas Number of the *Times of Ceylon* will be fully up to the standard of past issues of that attractive annual. It is to have seven full-paged coloured plates, any of which are worthy of framing, besides sixteen studies in photogravure and other illustrations, whilst the contents—well we all know how readable those are, even if the headings at times are not easy for laymen to pronounce. Price 3s. 6d. post free from the *Times of Ceylon*, Blackfriars House, New Bridge Street, London, E.C.4.

PALM AND OTHER OILS—PART III.

Coconuts and Coconut Products.

CAN it be claimed—as we believe it can—that our tropical colonies, in comparison to their wealth, conveniences and numbers, are fighting more keenly and more cleverly, i.e., with more chances of being benefited by their efforts to improve matters, than we are on this side? If such a claim holds good, or seems to do so, it is because all (worth troubling about) are working together overseas and it is easier perhaps to know what has been done and to realize the benefits obtained to the full.

Even to-day in spite of the slump, if you mention the letters F.M.S. or the name Kuala Lumpur, one's mind at once thinks of rubber, but not so the wise men over there. They are thinking and working—sparing no pains in their efforts—to develop other industries as well, palm-oil, rice, camphor, tea and coconut, to mention but a few, and this month we will consider what they have to say in connection with coconuts. Their General Series Bulletin No. 8 has arrived, it costs one Straits dollar (say 2s. 6d. including postage) and covers 100 pages with a number of useful illustrations, especially in connection with the storage of the nuts and the preparation of the copra by local methods, the whole being very cleverly drawn up and subdivided. Here perhaps, thinking of the first paragraph in these notes, which refers to the general run of farmers and producers, we think it but fair to quote the first two paragraphs of the preface written by Dr. Tempany, the Director of Agriculture over there, one who learnt to know the tropics and tropical production through official experience in the West Indies and in Mauritius if not elsewhere, before he went to Kuala Lumpur.

"In 1928," he tells us, "our scheme for research work on copra in Malaya was propounded partly as the result of the visit of Mr. E. H. M. Lloyd, secretary to the Empire Marketing Board, to Malaya and subsequently given effect. The scheme is financed jointly by contributions from the E.M.B. and the Government of the F.M.S."

"Under the scheme Mr. F. C. Cooke, B.Sc., &c., &c., was appointed assistant chemist in charge of Copra Investigations and assumed duty in September, 1929. In 1931 he visited Ceylon for the purpose of comparing the conditions under which copra is produced in that island compared with Malaya."

The Bulletin under review gives the results of these investigations, visits and comparisons, and has much to teach anyone willing to learn. Every month for many years past we have regularly given, on five dates of each month, the price of the leading copras quoted in London, including Ceylon, Java, the Straits, the Philip-

pinas and South Seas, with a "mention" of Malabar (generally N/Q=no quotation, which is their fault not ours) as well. The matter of the prices of the various copras comes up in this discussion because the object of all these investigations was to ascertain wherein consists the difference between their market values. Thus the Malayan copra sells at a lower price than the Ceylon article. Why so? If you send along your Straits dollar you will have some idea why; in any case the Bulletin, which is divided into two parts, first describes the conditions under which coconuts are grown and the copra prepared in Ceylon, whilst the concluding portion tells us all about the work in Malaya, especially the results of the copra investigations (in Malaya) up to June 30th, 1931. One imagines that engineers, especially those who specialize in machinery for drying produce, should be particularly interested in this Bulletin as it has illustrations as well as descriptive matter of how the local methods of drying the copra are carried out and the erections used both in Ceylon and Malaya. All these seem most suitable for the work, especially if fitted with a Blackman (or other make of) fan to circulate the air and equalize as well as hasten the drying.

Having taken up rather more space than we intended doing at first to reviewing the Bulletin, let us devote the rest of the space at our disposal to giving a rough idea of the authors of the various articles on the coconut and its products published by Malaya in their *Malayan Agricultural Journal*, price 50 cents, or half a Straits dollar, say 1s. 4d. post free. The July issue of the *M.A.J.* for instance, Vol. xx, No. 7, appeared as a "Special Coconut Number," which shows how fully this centre has gone into the matter. Between February, 1929, and January, 1932, the *M.A.J.* included to our knowledge twenty articles by Messrs. Jack, Georgi, Sands, Buckley, Grist, Cooke, Bunting and others, on coconut products. We have not space to say more, but those who know Malaya and its planting literature will know anything these authorities write on will be worth reading and filing.

Next month, therefore, we will write on the article, i.e., copra and not on its literature, but would like to conclude these notes with the following in connection with the drying of copra in Malaya:—

- A. The method of drying employed in Malaya can be classified into 19 groups, according to (1) the type of kiln used, (2) the all-in drying time, (3) the method of firing.
- B. On estates, 57 per cent. of the kilns are smoke-kilns; 38 per cent. are hot-table dryers; 3 per cent. use hot air and natural

draughts, and 2 per cent. are mechanical dryers using forced draught. The shortest period of drying is 24 hours and the longest seven days.

What we do not agree with if Malayan copra is to sell equal with the best, is the suggestion that at present there appears to be no scope in the Colony for expensive mechanical dryers. Of course much depends here on what you call "expensive" for a copra dryer, but more efficient appliances than what they have to use, seem to be necessary.

One cannot help thinking at times that the whole question of drying tropical crops has never received the attention it deserves. Surely it is of prime importance in every way to try and find out which is the best system—on the whole—for each product. Perhaps at the next Directors' Congress attention will be given to the matter.

The Australian Pastoralist of Brisbane, Queensland, calls attention, not for the first time we believe, to the possibilities and the profits of a tung-oil industry for Queensland. Essentially a hillside tree, thriving in most rocky situations and in the poorest of soils, resistant to drought and high temperature, the tung-oil tree *Aleurites fordii* should become a source of considerable revenue, if properly cultivated, in several hundreds of square miles of unused, some think unusable, land extending as does the great area of coast ridgeland from Rockhampton south to the Queensland. Writing under the name of "Graphite" (we feel sure it is) Mr. Wm. Lees, a very old friend and reader of TROPICAL LIFE in Queensland, tells us much that is useful on the matter.

The tree lasts from 25 to 30 years and an acre of year-old tung-oil trees is said to be able to give up to 1,800 lb. of oil in a year. The annual world-output of tung oil for export is about 40,000 tons. Returns from Florida speak of a revenue of 48s. per tree but we are not told how many trees go to the acre, but as they have a spread of 30 feet x 30 feet high at eight years of age, they should run about 50 to the acre. About 60 gals. of oil weighing 560 lb. or $\frac{1}{4}$ ton are obtainable per acre, and one estimate claims that an area of 1,000 acres, planted 70 trees to the acre, will produce 250 tons of oil at 240 gals. to the ton. It is a pity this useful paper is not obtainable over here, perhaps it is at Australia House, or at the offices of the Agent-General for Queensland at 409, Strand, W.C.2, but we cannot say for certain. We are glad that so able an authority has taken up the cudgels on behalf of tung oil for Australia and the Empire, as the Empire could produce much (in theory, but why not in practice?) in many places. If Florida has done so well, we feel sure many places within the Empire can match that go-ahead State and leave it behind;

for this reason we wish the Tung Oil Corporation of Australia, Ltd., every success. Anyone wishing for news of this concern can no doubt obtain same from the editor of *The Australian Pastoralist*, New Zealand Chambers, Queen St., Brisbane, Queensland. The notes we have been commenting on, we feel sure are his, hence this recommendation.

Trade Promotion Series, No. 133 of the U.S. Department of Commerce (price 10 cents) is devoted to a discussion of the economic and commercial factors in the development of an American tung-oil industry, by C. C. Concannon, Chief of the Chemical Division. It appears that as much as \$15,000,000 a year have been spent by the U.S.A. for supplies of tung oil from China. Irregular shipments, variance in quality, wide price fluctuations and other handicaps associated with complete dependence upon a single foreign source brought Uncle Sam up on his two legs and caused him to turn the attention of consumers of tung oil in America to the possibilities and advantages of developing home supplies. Hence the publication of the above report (No. 133) which discusses the present status of American cultivation of the tung tree and of the oil obtained from it. Notes on planting in other countries together with some notes on the Chinese production and export are also included. All that remains to be seen is the rate at which those \$15,000,000 a year will be lowered.

Talking of palm-oil, a man from Malaya popped in—he said to rest himself, so we will leave it at that—but he stopped a round hour and we talked of many things but not of rubber. Discussing the palm-oil industry in Malaya, he claims (and others say the same thing) that whilst leading firms here are supposed to be producing palm-oil in the Belgian Congo for "home use," it is being shipped to the United States as quickly as produced and used in the tin-plate industry, and also, probably for the galvanized iron industry as well, if there is such a thing in America. Discussing the matter with another authority who has made a close study of palm-oil extraction both in West Africa and Sumatra, he told us that, so far as his knowledge goes, "tin-plate workers have always been one of the largest users of palm-oil. Off-hand, I would say that they prefer oil with a low f.f.a. content but, on second thoughts I believe it is the other way round; in any case I have been told that oil with an overshare of f.f.a. always sells well in America. This is not surprising when you remember that f.f.a. in itself is used in polishing pastes and soldering solutions so, probably, it assists the tin-workers as a flux. Formerly America used to buy their fluxing oil in the U.K., but evidently the trade has been short-circuited and shipments go direct."

The Awakening of Latin-America.—Part II.

What of Brazil as a Start?

READING what we had to say on the above subject, Baron Danvers, director of the Brazilian Information Bureau, at 5, Bloomsbury Square, W.C., wrote us as follows:

“Pushful natures in this country (the U.K.) are bound to feel the call of South America and her promise of profits made to those of the right calibre who have the patience and determination to become experienced in the exploitation of her, at present, undeveloped resources. As time goes by, judging by all one hears and sees going on, this call will become more and more irresistible.

“Just now, land values over there are low; but they will in due course increase in value considerably, especially those areas situated favourably along the coast and the banks of navigable rivers where the owners can enjoy cheap transit. This being the case it is but small wonder that many schemes have been mooted for the acquirement of fairly large areas of land with a view of selling settlement lots to newcomers; propositions which lend themselves to picturesque, descriptive and speculative treatment and so make attractive tales on paper; tales which would, no doubt, have been highly profitable to the promoters had they materialized. Those, however, without experience and knowledge of Brazil and her people are likely to find results from such tales unsatisfactory.

“In this connection I would claim, to prevent disappointment, that the following factors have to be carefully considered:—

“(1) In some of these areas, land can only be held by national or naturalized settlers, or companies operating under the regional laws, so that land titles need very careful investigation.

“(2) The acquirement of land, even if it be quite suitable for cultural purposes (which is not always the case), is after all only the preliminary outlay, as there must be some convenient living accommodation, however primitive.

“(3) In addition, tools and implements, &c., will be required, and seeds and seedlings (or in other cases stock) will necessitate still further outlay, although in some of the South American countries the Government furnish these.

“(4) The most profitable crops take some long period to come into bearing and the interim may easily spell disaster.

“(5) There are peculiar local difficulties regarding various phases of agriculture which require technical assistance and without this the result may be a substantial loss.

“(6) A knowledge of markets is also essential unless one is going to be severely exploited, and

this requires sometimes as much inside knowledge as the plantation work itself.

“(7) For a British settler to undertake the responsibility of a comparatively small area, means that he must himself engage in forms of labour that could much more cheaply be done by local labour. This is not the best utilization of one's strength.

“(8) To make headway in foreign countries it is essential that the settler should know the language, have a working knowledge of the law, and a knowledge of the customs and the mentality of the people by whom he is surrounded, as the lack of this information may easily lead to complications.

“(9) There are considerable, and even enormous, drawbacks to isolation, because good comradeship is ever an inspiration, and certain amenities are necessary to obtain the best material advantages.

“(10) Solitude is not without certain perils, material and moral, and a stranger can very easily be exploited by those who seem to crop suddenly up around him.

“(11) It is quite obvious that any settler must be provided for until the crops on his land yield some substantial return. It is equally certain that any proposition of land purchase which offers any attractive assistance during this period is commercially unsound, as it may actually mean that he is to be reimbursed out of his own subscribed capital, and the possibility of this being available may be dependent upon the influx of new land purchasers on identical terms. If these do not come, what will happen?

“If the young settler finds that life abroad is not congenial, an investment carried out along lines of which details cannot be given in a letter like this, need not be lost. If, on the other hand, some form of activity commends itself to him other than that which he originally intended to pursue, the diverse character of the operations of such an undertaking would probably permit of this. It is confidently believed that some such method of procedure holds far greater elements of success than risking untrained individual attempts on uncultivated land amidst more or less isolated surroundings when capital is limited and its owner unknown.”

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We are glad to hear that the *South American Handbook* for 1933, issued by the Trade and Travel Publications, Ltd., section of the Royal Mail S.P. Co., will appear as usual for next year, probably in December. Those who, like ourselves, are anxious to have a copy, can obtain them from 14, Leadenhall Street, E.C.3, as before. The price, no doubt, will be the same, i.e., half-a-crown, but fuller particulars will be given in our pages later on,

India's "Push" in White Sugar Manufacture.

The Advantage of Briquetted Bagasse as Fuel.

RUMOURS, mainly correct, have been wafted our way, concerning the proposed forty factories to be erected in India in order to turn out, at an average of 20,000 tons per factory, the 800,000 tons or so of white sugar (of a sort) that India imports as a rule each year in preference to buying so large a quantity from abroad or to eating *gur* or *rab* or whatever the native manufacturer likes to call his product.

"Where are the factories situated and what are the names of them?" we innocently asked an old-time sugar trader with India, who had looked to India for many a fat order for sugar each year. "I do not know and do not care where they are," was the emphatic reply, "and as to their names, it would be a good idea to call them after the forty

is an illustration of the actual machine sent. "And by the way," added Mr. Shirtliff, "we had an inquiry from Angola and another from Portuguese East Africa this week, and both said that they got our name from your paper."

In practically all modern cane mills, we believe, the power to drive the mill is derived from the bagasse. This is burned under the boilers in furnaces specially constructed for using such fuel. Most of the modern mills turn out more bagasse (or megass) than is required to feed the furnaces. Of this surplus, some is briquetted and used as fuel for the plantation locos, steam launches, etc., as in such cases to use loose bagasse is impossible. The rest of the surplus residue is baled and stored during the off season when the mill is not working. Such a policy enables the factory to have a good supply of fuel ready when grinding starts again.

The most suitable machine for briquetting the bagasse in this way is of one type only, but made (so far) in two different sizes. For baling bagasse,

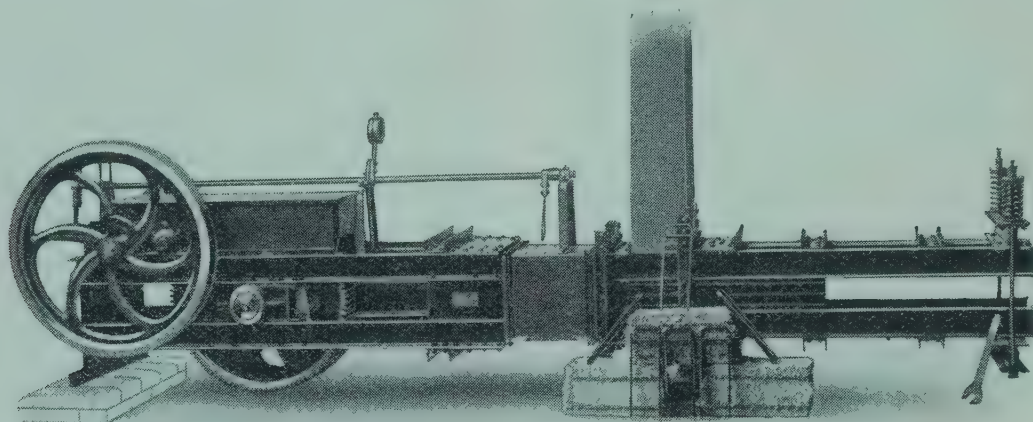


Illustration of a heavy type horizontal press, to turn out bales, about 12 in. square, of the wet bagasse as it comes from off the carrier, the bales being tied as they are passing through the press, which is fed down the perpendicular shaft immediately above the bales in front of the machine.

thieves, since they have come or are coming sneaking along to take business from the hands of honest men who have long and faithfully fed India with sugar after teaching her to appreciate decent stuff instead of molasses and water."

We went elsewhere for further information.

Meeting Mr. Frederick Shirtliff (of Letchworth) we asked him for news knowing he was greatly interested in the new move, especially as there seemed to be a good chance of the up-to-date, save-all-you-can folks, who are erecting and running these factories, to briquet or press-pack their bagasse for burning and not rake it in, as of old, like hay, after time and money had been spent to make it in a condition suitable for burning.

We discussed Mr. Noel Deerr, the leading authority on sugar of the present day after Dr. Prinsen Geerligs. It appeared that Mr. Deerr, out in India, had sufficient interest and confidence in Messrs. Shirtliff's machine to order one, and here

there are two types of presses, viz., the vertically working type with a separate running box which some planters prefer, and the horizontal type which gives continuous working. This latter is made in three different sizes and is in favour with many as they work quickly. There is a big punch and then a drop (of another bale), and this is repeated to suit the wishes of the man or men in charge. In some of the sugar mills, the cane is ground so fine that the horizontal type of baling press is unsuitable. In such factories, therefore, the vertical machine has to be used, but with most of the plantations the horizontal press can be used and is much preferred on account of its large output. This is a great advantage when handling the bales at any time, but especially when working at great pressure (of time) as then they can be passed along easily and thrown just as they are into the furnaces like a billet of wood or a large lump of coal. There is every sign, therefore, that all the sugar factories

now being built will instal such presses, whilst many of the old-established factories will adapt themselves to use them.

There ought to be a marked improvement in the price of sugar between now and next June, if prophecies and hopes concerning the 1932-33 world's output turn out to be true to any useful extent. Thanks to the goodwill of the large producing centres, other than the United States and their insular suppliers, a clear drop in the world's output of 2,000,000 tons is expected, following, be it remembered, a drop of 2,483,000 tons in this, the 1931/32 campaign, compared with the 28,781,873 tons, cane and beet, produced in 1930/31 crop. Thus a reduction of practically 4,500,000 tons is looked for in the two campaigns. To restrict in this severe manner, Cuba (which could put out 6,000,000 tons and more) is to produce 2,000,000 tons only and some say 1,750,000 tons, Java, whose full crop should be nearly 3,000,000 tons is to cut back to 1,350,000 tons, and Europe is drastically reducing her output. America, however, tells a different tale. The Philippines alone are likely to top 1,000,000 tons against only 750,000 tons before her 1931/32 output, whilst the U.S.A., Hawaii and Puerto Rico are expected to produce on their top figures.

"There is less prospect of being murdered in Africa than in England," claims Brig.-General Burton, in "A Book of Man-eaters," "and certainly much less than in the United States of America, where the annual murder bill amounts to some 12,000 human beings. Compared with these in Africa the traveller will find a happier people, leading a freer life than, and in their own way enjoying as high a standard of living as, the inhabitants of civilized countries; for they have fewer and simpler wants and less to make them envious of others."

In sharp contradiction to reports circulated of life in Latin America, and occasional murders there, one could well claim the same thing for that part of the globe, especially south of Panama.

What is the latest news about powdered rubber; is it likely to come up to, even exceed, expectations, or what? The Press over here, it may be remembered, spoke of the new invention as being likely to simplify to a considerable extent the preparation of the latex on the estates and eliminate entirely the process of mastication at the factory, for in its powdered state the rubber is almost ready for mixing and vulcanization.

(Continued from p. 190).

as an officer. The war over, his studies and work were devoted to tropical America, in particular to the Dominican Republic and Cuba, if not elsewhere in the West Indies. In the Dominican Republic Dr. Ciferri, we believe, was placed in charge of the Agricultural Experimental Station and College of Agriculture at Haina, and later was appointed Director (of the Foundation) of the National Agronomic Station and College of Agriculture of Moca. From there he passed on to work under the Cia Agricola Dominicana of Quinigua, near Santiago de los Caballeros (an offshoot, we understand, of The Corn Products Refining Company of New York) under whom he started a private experimental station for his employers and directed its energies in connection with field work generally, including classification and control of pests and diseases in connection largely with the cassava plant as a supplier of starch. This probably accounts for an inquiry we have had from Cuba asking what books, if any, dealt with cassava, or where particulars could be obtained concerning its cultivation and preparation for market. (Sr. José Colom has an excellent article on the cassava in the Pan-American *Bulletin* for September. There he tells us that some 8,000 acres have been planted by a large American company in the Dominican Republic, whilst Java devotes about 2,000,000 acres to the crop and exported 270,274 (metric) tons in 1929 as cassava meal and tapioca products; tapioca being prepared from cassava = *Manihot utilisima* Pohl. or *Jatropha manihot* Linn.)

And now "Our Friend" is enjoying a well-deserved holiday by, apparently, working as attentively as ever in "taking stock" of his many investigations. This will, we sincerely hope, lead him to publish a good deal of the data he has, beginning with cacao. Although a good linguist, he seems rather diffident over publishing his work in English without an experienced editor able to understand the subject and put his wording into more classical English . . . if necessary to do so. Surely there should be no hesitation on this or any other point, for as Dr. Ciferri has already published well over a hundred papers on pure and applied botany in Italian, Spanish, English, &c., mainly if not always to do with plants and crops of economic value, as cacao, cassava, sugar cane, mahogany, &c., on the mycology, pathology, yeasts, pests, &c., connected with them, he should have no trouble in giving us new matter as well as old matter in up-to-date guise, which will be of the greatest value to planters and others, as also of course to future investigators. If we can induce "Our Friend" to visit London and become acquainted with the scientists and manufacturers interested in cacao and sugar, both sides should profit.



"Tropical Life" Friend.

No. 328.

Dr. RAFFAELE CIFERRI, Sc.D., B.M.S.

Director of the Experiment Station, Cia Agricola Dominicana, C. por A., Quinigua, near Santiago, Dominican Republic.

"OUR FRIEND" this month should be well known to our readers, at least those interested in the production and marketing of cacao, for we have, several times lately, had to refer to his work in connection with the fungi, moulds and yeasts that attack cacao, the beans in particular. This was specially so with regard to the reference in our July issue, where the opening paragraphs and also the first portion of the Cocoa Report at the end were built up of references to the results of his work.

In August, when we last heard from him, Dr. Ciferri had been touring through his beloved Italy, especially through the seaport towns. He wrote asking us to thank Mr. A. W. Knapp for a copy of one of his reports, and said at the same time that the remarks made concerning the work done on the Gold Coast on the moulds and mouldiness of cacao were perfectly justified. "At the present time," he continues, "I am revising my monograph on the varieties and forms of the cacao of the Dominican Republic. This I find a very tedious and puzzling work on which I have been occupied for five years, studying some thousands of pods. Now that I have come to the end of my studies, I do not feel too certain that the results will prove as useful to the cacao world as I had hoped would be the case, especi-

ally when one thinks of all the work put into the task."

On this point we have written to comfort "Our Friend" (if by any chance he needs comforting) by pointing out how useful his reports and works already published (as well as that we are told to expect in the near future) will be when compared with similar studies undertaken and published this century, all of which have brought us much that is new (to us, but old to the trees) concerning cacao. Our shelf alone, in spite of the many gaps that are there, starts with Jumelle's work in 1900, the same year that Hart—J. Hinchley Hart, F.L.S.—issued the first paper-covered edition of his work on "Cacao." This was just before 1901, when he warned Trinidad of the danger of the witchbroom disease, already being talked of in Surinam. Then came Dr. Paul Preuss with his "Cacao—its Cultivation and Preparation," of which we seem to have lost the original and only have our translation, which is incomplete. Olivieri's very useful book (also with paper cover and crude illustrations) appeared in 1903, and later, in 1907, came O. W. Barrett's (of U.S.A.) reports on "The Cacao Pests of Trinidad." Last but not least, as regards the study of Cacao and its diseases at the time, was the translation with the many original photographic illustrations of the "Report on the Witch Broom Disease of Surinam, its Cause and Treatment," by Dr. C. J. J. Van Hall and Mr. A. W. Drost, who studied the trouble most carefully, finally drawing up one of the most exhaustive (and yet plainly written for all to read and understand) reports on such a subject imaginable. This is of course the same Dr. Van Hall the second edition of whose book on Cacao has just been published by Messrs. Macmillan, but who at the time was the Director of Agriculture in Surinam with Mr. Drost working under him.

Italian born, Dr. Ciferri took his degree (of Doctor) at the University of Bologna, but even before that he must have led a busy existence. Our first knowledge of him was as Associate Professor of Plant Pathology and Natural History. About then he was appointed lecturer on zymology (to do with fermentation) in the Royal School of Enology¹ at Alba (Italy). After this he was lecturer on Plant Pathology and Physiology in the Superior National Institute of Forestry of Florence, and then on Botany in the Royal Botanical Garden and Cryptogamic Laboratory of Pavia. All this work was previous to the War, in which "Our Friend" did his full share

(Concluded on p. 189).

¹ Is enology the correct term?—"enol," we are told, refers to certain unsaturated alcohols, but enology itself is not given in Webster's Dictionary of 1912, except as a footnote and then has no definition attached.

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Tropical Life.

OCTOBER, 1932.

Monarchs and Money-making.

Are Republics a Drawback to National Prosperity?

THOSE who have made a point of studying, so far as time allows in these days, the fortunes of Europe since the War, cannot fail to have been specially attracted towards Hungary. This attraction is partly on account of the tragedies of its dynasty, partly on account of the inflammability of the Magyars when the right man or woman applies the lighted match to their war-like ardour, and thirdly and mainly at the moment, so far as this country is concerned, because there might have been a King Harold of Hungary. The story attached to this might-have-been is still with us and has been revived in a way that must make us all ponder over the query as to whether the world as a whole will settle down and can really progress without Kings or Queens at the heads of the various countries. Even when some folks look across to the U.S.A. they feel bound to say, "What a country." "What a people based on the cream of the world's energy and intellect since the days of the 'Mayflower.'" What a blaze of glory in every section could it send up to Heaven, with a King, a real, live, capable ruler able to attract the best brains round him, instead of a ballot-box Democracy whose one idea at present is to swear that no one man, be he ever so experienced and brainy, is better than another. The same with all the South American Republics. Like a gifted painter, struggling to attract notice and achieve fame, who suddenly has much wealth bestowed on him, the Republics are, and always will be, mere dilettantes playing at ruling instead of working to throw up one supreme family and dynasty to rule over them, leaving the general public to develop the country instead of everlastingly quarrelling over politics, doing no good themselves and preventing others, better men probably, from doing good to their country and countrymen and, most important of all, to the trade of the world at large.

But to return to the story of King Harold of Hungary.

In the *Daily Mail* of August 24th Lord Rothermere wrote, in our opinion, very much to the point in his article entitled "Moving back to Monarchy," when reviewing the current state of affairs. His article could well go *au pair* with Dean Inge's "Revolt against Democracy" written fairly soon after the War. Taking the *Daily Mail* article by itself, as has already been said, look round the world where you will, and see if you can point out a Republic that would

not honestly be better for being ruled under a fixed dynasty by a capable Crowned head, with equally capable Ministers under him (or her). Ask yourself honestly whether a Republic, or even a country where Democracy has got the upper hand for the moment, is not being ruled by its mobs and not by its Ministers; is being ruled, that is, by the ballot-box, which proclaims that no one is better than the other, and those with the least sensitiveness climb up quickest, the finer and better natures being unable or unwilling to contend with the rougher material. Lord Rothermere's article, or rather his several articles, caused us to think this out.

Writing from Budapest on June 11th, 1927, on the way, *inter alia*, some 2,000,000 Hungarians had been shut out of their country and passed on to other rulers by the Treaty of Trianon in 1920, Lord Rothermere's article at that time (five years ago) will be found¹ in the *Daily Mail* of June 21st of that year under the heading "Hungary's Place in the Sun," and, writing on August 24 last, he referred to this article when discussing the tendency for Europe to move back to Monarchy rule as follows: "Some four years ago, I was receiving repeated and influential requests to come forward as a Candidate for the vacant throne of Hungary. This arose over the campaign I started five years ago for giving publicity to the harsh injustice inflicted upon Hungary by the Peace Treaty of Trianon. . . . Deeply touched as I was by the honour which my Hungarian friends proposed to do me by putting my name forward for one of the most ancient and historic thrones in Europe, it did not seem to me that it was in the best interests of Hungary that she should choose a monarch outside her own dynasty and race." Thus ran the article in August, reverting back for a moment to the old one of June, 1927, we are told there that "A people like the Hungarians with a thousand years of national and constitutional tradition behind them; with a mediæval record as gallant defenders of Europe against the Turk; with a Magna Charta of their own—the 'Golden Bull' of A.D. 1222, only seven years later in date than our own—is not to be treated like a newly formed Balkan State of upstart institutions and inexperienced politicians."

"So whilst refusing the honour offered to me," Lord Rothermere wrote at the end of August, "I feel strongly, however, that the desire to have a King once more is natural and right in a nation accustomed to this form of government through the vicissitudes of a thousand years. Now that the trend of modern political development is favouring a return to

this system, the British nation, with its long and happy experience of Kingly government, should be the last to deny similar advantages to those seeking them, whether it be Hungary or other lands and people."

Of course all rulers and dynasties are not, have not been and never will be, perfection, neither an advantage to their country and people nor, in these prosaic, money-hungry days, to other countries as well, and so, thinking only of the present, it would be suicidal to the general welfare to put back all the occupants of the thrones of Europe, or their heirs as they were in 1913. Incompetent to govern themselves and unwilling to be led by others whose advice and knowledge were not a danger to Europe and the commerce and comfort of the world at large, these former rulers can well remain outside the Royal Palaces. All this, however, does not alter the fact that States, having no permanent Heads, have never shown any signs of being able to settle down and pursue their way in all branches of life as has this country, or in more modern times Japan, Holland or Belgium have done, and when one looks overseas and realizes how golden opportunities, existing on all sides, are being allowed to run to waste throughout the Republics of the Latin-speaking countries the state of affairs is deplorable and causes everyone else to stagnate. These countries need populations and markets, whilst Europe and even America need room and markets in their turn. All this can be arranged, for nothing will convince us, looking back through the ages, that although rotten rulers and governments have at times ruined their countries, when better men, supreme as rulers, have taken possession of the countries and carried on the story of steady if—at times—painful progress, marked improvements have taken place and will do so again. To-day all these Kingless countries have become stagnant or at the best puzzled how to employ and feed their people, to develop their trade and square their Budgets. So we say, look round the world carefully and ask yourself honestly one or two questions, as for instance:—

(1) What signs—if any—are there of any improvement in commerce and trade taking place?

(2) Is not the present state of political chaos and commercial stagnation due to the world having too many advisers but too few real rulers?

(3) Until all these 25 per cent. or 50 per cent. inefficients are put on one side and one real ruler put in their place how can things "get a move on them" either politically or commercially?

(4) Is it not better therefore to have one King or Queen, able to hold together the country and to act as a "brake" when a box full of puppets pops out of the ballot-box, to be here to-day and gone to-morrow, all the time fighting, not to help their country, but to pull down those above them or to keep down those below?

¹ May we here pay tribute to the keen willingness of the young clerk at the back-number centre of the *D.M.*, at 130, Fleet Street, to help us to obtain the full story of this international affair. It was very pleasant to meet one so ready to help both his employers and the public.

Gold, Silver, and Trade.

Second-hand Money.

THE London *Morning Post* included the following interesting couple of paragraphs in the Money Market of its issue of September 2nd, when it told us:—

"Yugoslavia is to have a few hundred new silver coins. This item of news recently announced would at first sight seem to be of little interest to the man in the street. These coins, however, says a correspondent, 'are to be struck at our Royal Mint, and are to be made from good English silver coin withdrawn from circulation.' This event is an incident in one of the most interesting chapters in the history of our currency. Our silver coins had long been struck from an alloy containing the high proportion of 925 parts of pure silver in every 1,000. This alloy was certainly used as far back as Saxon times, and, although the standard was not always maintained, it was restored during the reign of Elizabeth. Thenceforth the 925 alloy was used continuously until the post-war Coalition Government thought fit to make a change. In the abnormal days of 1920 silver had risen to a record price of 89½d. an ounce, and the actual metallic value of a half-crown was 3s. 4d. The Government of the day, in the interests of economy, decided to break with tradition and reduce the proportion of silver in our coins from 925 parts to 500 parts in 1,000. Further, nothing less than a complete re-coinage of our silver was ordered. The old coins were all to be withdrawn and replaced by their debased brethren. This task of withdrawal, thrown chiefly on the banks and post offices of the country, was so colossal that now, after twelve years, it is apparently only nearing completion.

"Since 1920 silver coin has been withdrawn to the value of £55,000,000—representing something like 800,000,000 coins, and weighing well over 2,000 tons. The old coins were melted down and partly used for the manufacture of the new ones. As the silver in one old coin was sufficient to make almost two of the inferior ones, a large supply of unwanted silver was left with the Mint. Part of it was sold and part is being used for the manufacture of coins for foreign States. The present issue for Yugoslavia is only one instance. Our old English coins, after years of faithful service at home, are to be found masquerading under old names and new designs in all parts of the world. Many a 20 drachma piece circulating in Athens has in another form changed hands in London, while the zlotys of Poland, the 50 copeck pieces of Russia, the lats of Riga, and the centavos of Guatemala, like the new dinars of Yugoslavia, have been in happier days good coin of the Realm of England."

In the same issue, Lieut.-Col. R. V. K. Applin,

writing on "Gold, Silver, and Markets," ended by saying:—

"We have production in food, raw material and manufactured goods to supply the wants of our people in abundance, but we have neither the gold to pay for the balance of trade nor the currency to provide the capital and pay the wages of the producers.

"It is universally admitted that there is not gold enough in existence to finance the present trade, and there is no possibility of a revival of world trade without a great increase of money acceptable to all nations.

"Silver and gold have existed side by side as the currency acceptable to all mankind ever since Abraham paid 400 shekels of silver ('current money with the merchant') for the Field of Machpelah, and we have been on the dual gold and silver standard from Roman times until 1873, when Germany, flooded with French gold after the war, went off silver and we very foolishly followed suit.

"For 200 years silver remained staple in its ratio to gold at about 15. To-day the world produces about 19,000,000 oz. of gold to 260,000,000 oz. of silver, which is a ratio of 13.

"China, with a fourth of the population of the globe, has never abandoned the silver standard, and silver in China to-day will purchase about the same quantity of Chinese produce as it did 100 years ago.

"Five hundred million people are waiting to trade with the world, but the world will not accept silver as currency. Surely the question of a return to silver in conjunction with gold is the next step for the Empire to take? India, rich in silver, is waiting to buy, and China, richer still in all the world wants, is waiting too.

"A world conference on finance and currency must follow, then gold and silver, the husband and wife of commerce, will be united once more and produce 'prosperity.'"

We reprint the above without comment, feeling that nothing we can say will add to the interest and value of the information conveyed.

From Jamaica comes a request for fuller information and literature dealing with the Citrus industry, especially in British Columbia, South Africa, Palestine and Queensland. This shows how widespread the information we give is considered to be, although in this case we rather wonder our subscriber did not write direct to the Departments of Agriculture at the places mentioned.

We are still open for offers of financial assistance and the supplying of the machinery for a cotton spinning factory in East Africa. Particulars supplied on application.

Preaching to the Converted.

The Waste of Time, Money, and Willing Service whilst doing so.

IN our August issue (p.143) we wrote somewhat bluntly expressing the regret we have all along felt in not being asked—whether for payment, as running papers costs money—or otherwise, to help push British East Africa as an ideal centre for suitable newcomers who, as we put it, “want a change. Floods, labour troubles, questions of health, &c., are urging them to move, but where to go?” Let us tell them where to go and they will go quick enough if found suitable. Now we understand that the Kenya Settle-

ment Association is about to launch, or has already launched, an intensive campaign to attract officials, Army men, &c., from unsettled and uncertain India, to come to East Africa. We go to many readers in India, including over sixty of the leading clubs, and it is the same with other Anglo-Eastern countries. What better connection than that does Kenya or East Africa generally wish for?

The Soviet Government, we are told, has approved of the English plans for the construction of an underground railway in Moscow. “The English tender,” claims the *Central European Observer*, “was more favourable than those received from Germany and America.”



MARKET REPORTS, GOSSIP AND PRICES.

Prices and Prosperity.

ONE feels that most of our readers and a great many others, producers and shippers of crops and metals, would like to run through the opening pages, under the above heading, of the *Review* of the Westminster Bank for September (No. 223), as we have just done, for it has much to teach its readers of causes and effects, and through them of the past, present and future of the commodity markets. Some of the statements we have underlined include the following:—

“In June, 1931, when the hurricane which three months later was to sweep sterling from its gold anchorage (on September 21st) was visible merely as a cloud on the horizon.”

“This year, in a significantly large number of instances, the decline in world prices was checked during July and gave place to a perceptible recovery during August.”

“In the majority of cases, the slump in values attained its greatest momentum between 1929 and 1931, but the rate of decline remained considerable for the first six months of this year, particularly as regards tea, copper and rubber.”

After expressing regret that outputs have been balanced with demand, not because consumption has been maintained or increased but owing to production being lowered, the *Review* adds a ray of hope by saying: “The mere fact that prices are rising may induce consumers to replenish their supplies which, under (past) conditions of hand-to-mouth buying, have become distinctly attenuated. If upon this tendency were superimposed even a modest revival in real world consumption, the enhancement of prices might be greatly accentuated.”

“Cheap money is the classic solvent of trade depression . . . it has hitherto failed to exert its full influence because extreme depression has paralysed (italics ours) the initiative of those who use money. . . . The world’s innate virility, in the face of the worst depression, has shown more than the first signs of determinedly reasserting itself. If revival has not yet definitely begun the stage has been set.” And so the story runs on; a warning here and good news there, but, on the whole, advice to us all to be ready to help turn the tide of prosperity and, when it has turned, to help everyone to help ourselves to keep it on the flow. “Progress will be dependent upon the willingness of those concerned. . . . The present opportunity, the most promising since depression began, is far too precious to be lost for want of courageous, collective activity.”

Dropping into unmitigated slang, all must own that, at the present moment, the above truly is “the stuff to give ‘em,” so let’s all pass the story round, without exaggeration, and rub it well in. “Prosperity through Progress will be ours if everyone is willing to work and bring them along.”

Moving on to Barclays (D.C.O.) Bank, we meet with an excellent example of how improved markets are heralded by their opening paragraph referring to the state of the markets in South Africa generally. Cabling from Pretoria, on September 16th, their Manager said: “A better tone is developing in commercial circles; the rise in prices overseas, the strength of the opening wool sales, both in Australia and the Union, the rise in the Bradford top market and the success which has attended citrus exports have been

encouraging. The results of the Ottawa Conference have been accepted with satisfaction, the preferences granted to fruit and dairy produce being especially acceptable. There is a small seasonal revival in trade in some country districts, where travellers are obtaining better orders."

Thus are Progress and Prosperity likely to be attracted by those who work earnestly to draw them to their markets. When they are well ensconced, however, then will be all the more need for care to keep them, for whilst we are generally aware of the approach, they have a nasty habit of leaving before anyone, except the keener watchers, are aware of the fact.

And now, moving on to our usual market gossip, we come to:—

Vegetable Oils (London and Liverpool).

MALAY PALM-OIL, TO ARRIVE, £19.

Reports from Liverpool speak of their palm-oil market as being steady with sellers of Lagos, forward shipment, at £18 5s., and softs, on the spot, sold at £17 5s. Now sellers for spot and near are asking £17 7s. 6d., against £17 10s. for October-November, with business done in November-December at £17 12s. 6d. with sellers over. For shipment, medium is quoted £18 5s., hard £19 10s., Red Sherbro £17, and Malay oil October-November shipment at £19 sellers per ton.

With regard to other products we will start as usual with:—

COPRA PER TON.

	CEYLON F.M.S.		JAVA F.M.S.		STRAITS F.M.S.		PHILIPPINES F.M.S.		SOUTH SEAS F.M.S.	
Sept.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
24	16	0 0	15	0 0	14	17 6	14	2 6	14	5 0
21	16	0 0	14	17 6	14	15 0	14	0 0	14	5 0
17	16	0 0	14	17 6	14	15 0	14	0 0	14	5 0
14	16	0 0	14	17 6	14	15 0	14	0 0	14	5 0
10	16	0 0	14	17 6	14	15 0	14	0 0	14	5 0

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation on Sept. 24th, f.m.s.

COCONUT OIL PER TON.

Ceylon mill oil on Sept. 24th was quoted at £28 for spot parcels against £23 5s. (cylinders) for Sept.-Oct. English deodorized in barrels is worth £34 10s. per ton against the same price a month ago.

OTHER OILS PER TON.

Sept.	CASTOR FIRSTS		GROUNDNUT CRUDE*		COTTONSEED CRUDE EGYPT		LINSEED SPOT†		SOYA BEAN SPOT, NAKED		PALM KERNEL OIL‡	
	£	s.	£	s.	£	s.	£	s. d.	£	s. d.	£	s.
24	37	0	35	0	23	10	18	15 0	24	10 0	22	10
21	37	0	35	0	23	10	17	10 0	24	10 0	22	10
17	37	0	35	0	23	10	18	0 0	24	10 0	22	10
14	37	0	34	0	23	0	18	10 0	24	10 0	22	10
10	36	10	34	0	23	0	18	5 0	24	10 0	22	10

* Crushed, naked.

† Net, naked, ex-mill.

‡ At Hull, naked.

SEEDS PER TON.

Sept.	LINSEED (AT HULL) CALCUTTA		COTTONSEED EGYPT BLACK		CASTOR BOMBAY		SOYA BEANS GROUND-NUTS		MANCH. AFLOAT	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
24	11	6 3	9	7 6	7	6 3	12	10 0	15	0 0
21	11	2 6	9	2 6	7	11 3	12	12 6	14	17 6
17	11	7 6	9	8 9	7	8 9	12	12 6	15	3 9
14	11	10 0	9	15 0	7	10 0	12	15 0	15	6 3
10	11	10 0	9	7 6	7	6 3	12	12 6	15	3 9

Desiccated Coconut.

The market for this article is steady with fine on the spot quoted at 24s. and medium 23s. 6d., whilst for September-October shipment, halves are quoted at 22s. 9d. c.i.f.

Coffee.

The Public Ledger of Mincing Lane, inspired we take it by friends to do with coffee in East Africa, writes as follows. Unfortunately we have no chance of checking the figures, so all we can say is that, if correct, they are too high, but it is not quite fair to bring in inland railage, also would not cost of packages and packing (= £17 9s. 6d.) stand, however the coffee is sold. If the estates are established far up country that it is no one's fault or misfortune, unless it is the owner of the property. This is what the *P.L.* says:—

"It is not always realized how high the charges are for bringing coffee from the plantations to c.i.f. London. Here are representative figures giving the cost of bringing approximately twenty tons of coffee from Bukoba to c.i.f. London. Inland railage £88 18s. 6d.; ocean freight £78 12s. 2d.; Government handling and wharfage charges £13 4s. 2d.; insurance £5 2s. 2d.; cost of packages and labour in packing (233 bags) £17 9s. 6d.; weighing and marking £1 6s. 2d.; making a total of £204 12s. 8d. We take it that this list of charges has been published to prejudice coffee planters against sending their coffee to London to sell at public auction. If the case has not been overstated, no doubt the object suggested will be attained; whether the planters will benefit thereby, time alone can show. We have never believed in splitting up sales, especially of coffee. London is the most cosmopolitan centre and the easiest to buy in and get prompt deliveries from. This being so, surely it must pay best to bring all the big buyers of the world to one common centre and so build up and strengthen the competition and bids. To do otherwise may show the "All Clear" for a time, but, we feel sure, when it will be very difficult to change back, planters will find that if it costs £5 (not £10) more to send their coffee to London for sale, they will, year in year out, get £10 per ton and more extra, by centering all the competition in one place. Cables of September 15th spoke of the coffee market at Nairobi as being still dull with another 3,000 acres added to last year's area in Kenya, making 102,463 acres in all under coffee, and a good crop is expected. In London on September 12th Messrs. Woodhouse spoke of the considerable activity in coffee for price and that several thousands of bags of "bought in" coffee had been disposed of with values gradually hardening for all grades and Kenya coffee sold at full prices. Those who believe in split markets will do well to think of

this before putting up such a bogey of costs, and ignoring the light, which we have shown behind the bogey.

Speaking of the Sudan, Barclays D.C.O. Bank manager over there cabled that a small improvement is recorded in their export market. Some shipments of coffee to Egypt are reported and Greece also is buying from the Sudan owing to the recently placed duty upon Brazilian coffee.

Coming to prices, Messrs. Woodhouse speak of fine London cleaned Costa Rica selling early in the month at 148s., and foreign cleaned at 125s. to 128s. 6d. Foreign cleaned Peruvian sold up to 78s., also at 69s., and fine Jamaica up to 213s. 6d.

At the Public Sales, what are known as Jamaica Mountain Grown 3rd realized 148s., when Kenya sold at 80s. to 85s. for bold fair, 93s. to 93s. 6d. for good, 105s. to 115s. for fine, and 80s. 6d. to 106s. for peaberry. Seconds realized 77s. 6d. to 87s. 6d., and smalls 73s. to 77s.

Cotton.

According to the last reports to hand, the production of cotton this season in South Africa is estimated as likely to be only 2,660 bales, compared with 6,498 bales in 1931. This poor crop is due to unremunerative prices causing a wholesale reduction in the area planted and also to unfavourable weather conditions. In Nyasaland things seem somewhat better, the crop was being harvested and buying had already begun. The acreage under cultivation is less than it was in 1931, but owing to the better yield, it is expected that the output will approximate in weight to the crop of last year.

In Uganda conditions generally are favourable for cotton planting and 640,000 acres have been planted, against 566,000 acres at this time last season. The cotton market at Alexandria (Egypt) has been active, speculative influences having been prominent, and considerable fluctuations have occurred. A strong bullish sentiment seems to have caused a rise in values and at one time this was supported by unfavourable crop news from America, accompanied with reports that various schemes were being advocated in that country for supporting prices. When, however, the Egyptian market learned that the American crop estimate was likely to reach 11,250,300 bales against the previous anticipation of 10,500,000 bales, a heavy drop in values took place, we are told.

Coming to the home market our contemporary *Cotton*, writing from Manchester on September 16th, spoke of the satisfaction felt when it became known that negotiations for the settlement of the weavers' strike were to be resumed, and since then we have learnt that an agreement on all points had been reached and that work started on September 28th last. News from America tends on the whole to be on the bright

side, although the "Bears" claim that when it is realized what an enormous weight of cotton will come upon the markets during October and November, prices should drop. On the other hand it is said that the farmers down south, not having borrowed against the present crop, should be able to maintain a firm attitude and to obtain their limits.

Coming to prices, the following were the official "Spot" prices in Liverpool on September 23rd, and on the corresponding dates in 1931, 1930 and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	6.07*	5.88*	4.49*	6.05*	7.92†
Strict Middling American	6.22*	6.03*	4.69*	6.25*	8.03†
Fair Pernam	6.17	5.98	4.54	5.80	7.79
F.G.F. Sakel. Egyptian	8.75	8.75	6.95	10.30	11.10
Fine Broach	5.80	5.60	3.71	4.35	6 ⁷ / ₈
Fine No. 1 Oomra	5.41	5.21	3.54	3.90	6 ¹ / ₂
Fine Bengal	5.00	4.80	3.39	3.55	5 ¹ / ₈

* Universal Standards.

† Liverpool, Fully Mid.

‡ Good Mid.

Rubber.

American politics just now must be costing many people much money, as they are causing, and will cause, the price of commodities, and of rubber as much as any article, to fluctuate independently of statistics of supply and demand and of support from speculators as well as consuming buyers. This is caused by the absence of confidence in anything anywhere. A little time back, when discussing the upset that America is causing on the commodity markets, our contemporary the *Confectionery Journal* introduced the following paragraph in one of their market reports. Surely just now and until the American elections are over and, shall we say, the new President is in the saddle, the remarks are very suitable to the world-rubber market. They were dealing with cocoa. Under the sub-heading "Our Five Horsemen," the *C.J.* wrote: "Raw materials like cotton, sugar, and even cocoa, are beset by five horsemen which pursue them relentlessly. One—Legitimate Demand—is helpful; three are more or less uncertain, with a tendency to cause trouble, viz., Sentiment, Confidence and Speculation; whilst the fifth, Official Inflation, is distinctly harmful. As in the story of Vicente Ibanez, all five will be riding alongside every market for many months to come. Knowing this, take care not to trip lest their hoofs descend on you, even the hoofs of Demand, for it will be difficult at times to say whether Demand is favouring you or otherwise. As for Inflation, regard it as a plague, for it has been deliberately let loose to mislead the ignorant and unwary and will do so until called to heel again."

Coming to the weekly reports of Messrs. Lloyd, Matheson & Carritt, they show that the consumption in America is on the low side at 22,372 tons for August, against 28,272 for July and

27,586 tons for August, 1931, whilst their Stock and Afloat stands at 400,188 tons, against 302,285 tons a year ago. With prices they report as follows:—

SPOT QUOTATIONS—	1932 SEPT. 21ST		1932 SEPT. 14TH		1932 SEPT. 7TH		1931 SEPT. 23RD	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	3	0	2 $\frac{1}{2}$
Crepe (F.A.Q.)	0	2 $\frac{7}{8}$	0	2 $\frac{7}{8}$	0	3 $\frac{1}{4}$	0	2 $\frac{7}{8}$

FORWARD POSITIONS—	SEPT. 21ST SMOKED SHEET		SEPT. 14TH SMOKED CREPE		SEPT. 21ST SMOKED SHEET		SEPT. 14TH SMOKED CREPE	
	s.	d.	s.	d.	s.	d.	s.	d.
1932, September	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$
„ October	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$
„ October/December	0	2 $\frac{9}{16}$	0	2 $\frac{7}{8}$	0	2 $\frac{3}{8}$	0	2 $\frac{9}{16}$
1933, January/March	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$
„ April/June	0	2 $\frac{3}{4}$	0	3	0	2 $\frac{7}{8}$	0	3
„ July/September	0	2 $\frac{7}{8}$	0	3 $\frac{3}{4}$	0	2 $\frac{3}{4}$	0	3 $\frac{3}{4}$

STOCKS—	1932		1931	
	TONS		TONS	
London, Week ending Sept. 17th	46,176		81,048	
Liverpool „ „	58,028		55,024	
Total	104,204		136,072	

SINGAPORE QUOTATIONS—

Sept. 21st.—Spot, 7 $\frac{1}{8}$ cents; October/December, 1932, 8 $\frac{1}{8}$ cents; January/March, 1933, 8 $\frac{1}{2}$ cents.

Sept. 14th.—Spot, 7 $\frac{1}{8}$ cents; October/December, 1932, 8 $\frac{1}{8}$ cents; January/March, 1933, 8 $\frac{1}{8}$ cents.

Other Products.

Coming to this section we will start by saying that news to hand speaks of the tea factories in Nyasaland as having started to manufacture their new crop. From Malaya we hear, via the London Malay Information Agency, that the gardens at Sungei Balak in Selangor have made considerable headway combined with improvement in pruning and cultivation methods. On Cameron Highlands Experimental Plantation there are now 44 $\frac{1}{4}$ acres under tea which flushed well. It was found that by plucking leaf at intervals of eight days the made tea had a better appearance. The crop harvested seems to work out at the rate of 245 lb. made tea per acre per annum. As regards sales in London, from all accounts these run on the good side. For Indians quite a good demand prevailed, common descriptions being well competed for. Ceylons met with a decidedly better demand with more inquiry for export. Java and Sumatra were rather small in supply and met with a good demand, especially for common kinds.

Moving on to fibres we come to Jute. This article seems to have been subject to more violent fluctuations than usual. According to Wigglesworth & Co., Ltd., writing on September 7th, great activity had been the feature of late and prices have advanced substantially. Then came a reaction and £19 10s. dropped to £17 17s. 6d. for new crop Firsts; a rally sent the price to £19 10s. and even £19 15s., the Calcutta mills buying heavily and speculators being active. Old crop Firsts and other grades also brightened up in sympathy. Then a substantial drop must

have occurred, as from elsewhere we learn that after an advance of 5s. to 7s. 6d., Firsts for September-October shipment stood at £18 5s. to £18 7s. 6d., all c.i.f., against £18 to £18 2s. 6d. the month before (August). With Manila fibre, receipts and stocks are put at 605,000 and 140,000 bales, against 804,000 and 127,873 bales a year ago. In spite of this the market remains dull and shows little sign of revival. In face of the statistics, this must be due to a falling off in the demand. Quotations include K at £16 10s., against £16 5s. before; J2 at £19, which is unchanged, and so is M1 at £14 15s.

The strength of the sisal position, returning to Wigglesworth's report, has been fully maintained. The turnover has been exceptional for the time of year and augurs well for a still better market. Meanwhile prices remain below an economic level. By the end of the first week of September Europe alone seems to have caused the activity; one hopes therefore to see the U.S. and Canada making substantial purchases soon. In spite of this cheery news values by September 24th seem to have sagged, and stood at £16 (buyers) for good marks and £15 for f.a.q., all c.i.f. We are told that Java is asking her own price. Also that a large turnover has occurred. Does this mean that their sisal has been selling above East African? Mexico placed 200,000 bales in the middle of August on the basis of 2 $\frac{1}{2}$ cts. lb. f.o.b., which relieved producers and did away with any need to press the market and, since then, we understand, further sales have taken place on the same basis.

Shellac on the spot seems quiet with TN at 64s., Fine Orange 70s. to 125s., AC Garnet 75s. and RLI button lac at 77s. 6d. per cwt., against 66s., 70s. to 125s., 75s., and 77s. 6d. per cwt. respectively a month before. Palm kernels are said to be easier at £11 1s. 3d. per ton c.i.f., but this is still above the £10 15s. price in the September issue. Coming to metals, Tin has had its ups and downs during the past month, the latest price being £152 10s. for spot cash, against £149 12s. last month. Copper is rather higher at £35, against £33 10s., but reports of big sales left many disappointed that the rise was not higher.

Coming to finance, the one Bank Rate to show a change is Berlin, which has dropped from 5 per cent. to 4 per cent. This leaves Milan alone at the 5 per cent. rate. New York, Paris and Amsterdam are at 2 $\frac{1}{2}$ per cent., the Swiss Banks 2 per cent, Brussels 3 $\frac{1}{2}$ per cent. Bar silver is quoted 17 $\frac{7}{8}$ d. and gold 119s. 1d. per oz., against 108s. 1d. last year. This makes our table work out as under:—

SEPTEMBER 24TH	1932	1931	1930
Bank rate	2 per cent.	6 per cent.	3 per cent.
Consols 2 $\frac{1}{2}$ per cent.	73 $\frac{1}{2}$	52 $\frac{1}{2}$	55 $\frac{1}{2}$
Bar silver per oz.	17 $\frac{7}{8}$	11 $\frac{3}{4}$	16 $\frac{1}{8}$
Exch. on New York	\$3.46 $\frac{1}{2}$	\$4.11 $\frac{1}{2}$	\$4.86

THE WORLD'S COCOA MARKET.

(See also p. 183 *re* a Visit to the Chocolate and Confectionery Exhibition).

BY THE CONTROLLING EDITOR.

ANOTHER storey has been added to the largest building of Messrs. Cadbury's 75-acre factory at Bournville. In it several hundred workers will turn out a new product "Bourn-vita."

The Bournville chemists claim for this health drink that 90 per cent. of it is strength-giving within a few hours of its consumption. Especially suitable for women, its chief ingredients are milk, malt, eggs and cacao, all of which are drawn from Empire sources. The former three will be supplied by British farmers, and the latter almost entirely by planters under the Union Jack, and it is hoped that the waning production of malt may be stimulated as it is a comforting and nourishing foodstuff. This being so we wish it "Good Luck," and hope other similar products will appear in due course to help the world "Consume more Cacao."

In the same issue as our contemporary, *The Confectionery Journal*, refers to the interesting report entitled "The Preparing for Market and Marketing of Cocoa," issued by the Imperial Economic Committee, they publish the following paragraph on a subject which vitally affects our cocoa-growing readers:—

Is Cocoa Losing Ground?

"The statement that cocoa as a beverage has lost ground, which also appeared in an article in *The Statist*, has led to an interesting expression of view by Mr. L. J. Cadbury, Managing Director of Cadbury Bros., Ltd. In a letter to *The Statist*, Mr. Cadbury pointed out that the conclusion that the consumption of cocoa powder had declined very considerably was based upon a simple analysis of the figures for the Census of Production, which classification was indefinite. In 1924 representations were made to the Census authorities that the report would be of greater value if moulded chocolate could be given separately. Not all firms made the voluntary return disclosing their moulded production, but it was discovered that some of the firms had originally returned moulded chocolate (that is, blocks and bars) as manufactured cocoa or chocolate and some had returned it as chocolate confectionery. It was, therefore, necessary to subtract from the 1924 production of cocoa or chocolate a proportion of the total on account of this incorrect classification. Furthermore, there was strong evidence that the production given as "other cocoa products and chocolate confectionery, not separately distinguished" in 1930 would in fact have been included in the cocoa group in 1924, and from corroborative details it was likely that "other cocoa preparations" which in the official report were bracketed with

chocolate confectionery, were really included with cocoa powder in the 1924 Census. The result of these corrections, Mr. Cadbury pointed out, was to decrease the 1924 production and to increase the comparative figure for 1930. The corrections were clearly only approximate but their total effect was to show a genuine increase in the consumption of cocoa powder between 1924 and 1930 and this increase had indeed been experienced by his own firm."

We will add no comment on the remarks made, feeling that Mr. Cadbury can defend cocoa much better than we can. If, however, rumours are being spread abroad that cocoa as a beverage is a "back number," and is drunk, often as a mixture with but little cocoa bean in it, mainly by the working classes and the "hard-ups," whilst knowing that there is much truth in the claim, we would add that since the Public Sales down Mincing Lane have gone out of fashion, displaced cocoa men have been heard to express their views on the demand for cocoa beans and it is seldom complimentary. Perhaps, since some of the business no longer passes through their hands they imagine that the demand for raw cocoa, and therefore for the manufactured article, must indeed have gone "to the dogs." According to Mr. Cadbury, this is not correct, and the following table, showing the deliveries for Home Use in the U.K., goes to support his views. As has been pointed out more than once, the change in our fiscal policy has caused much less manufactured cocoa, some 5,000 tons in the eight months, to be imported. Instead of this, new factories, or agreements with old-established factories, have enabled this quantity to be made up in the U.K. to the benefit of the British work-people, whilst, it is claimed, prices tend to run lower to the consumer owing to the low cost of the raw materials, so that is all right. Let us glance at the figures for manufactured cocoa to prove our case and then go on to the movements of raw:—

MOVEMENTS OF MANUFACTURED COCOA IN THE U.K.

8 months	1932	1931	1930	1931/30 AVERAGE
JAN.-AUGUST	TONS	TONS	TONS	TONS
Imported	1,489	6,620	5,871	6,250
Deliv'd H.C.	1,657	6,478	5,882	6,180
Exported	5,632	5,088	6,116	5,602

Taking the Imports and Exports first, since the export trade has been maintained, taking the average of the two previous years, then surely the U.K. has been called upon to make this year some 5,675 tons more manufactured cocoa for export (say 6,620 tons imported last year, now

dropped to 1,489, whilst the exports have moved up from 5,088 tons in 1931 to 5,632 now), whilst our deliveries for Home Use (see below) of raw cocoa are 5,847 tons more. These eight months, therefore, whatever the cause may be, show an increase of 5,675 tons *manufactured* cocoa products for exports and 5,847 tons of *raw* cocoa more to help make that extra tonnage as well as satisfying the increase in our Home Trade. One rather wonders what a ton of raw beans turns out in the form of manufactured cocoa products of all kinds: powder, slab, fancies, &c. Is it correct that 112 lb. raw beans drops to 90 lb. (Knapp says 87 lb.) nibs after roasting and winnowing when ready for grinding? Then those 90 lb. turned into powder for drinking, can we say it leaves 56 lb. to be sold, the rest being extracted butter and slight waste? Slab cocoa needs much sugar and gets it. Fancy chocolates need a minimum of cocoa bean, 10 per cent. in some cases, and get it or less, allowing for fillers and then butter and sugar in the couverture. Thus one feels that 5,000 tons increase in our raw cocoa deliveries against much the same tonnage in our deliveries of the manufactured article could leave probably 4,000 tons of raw to go to satisfy an increase in the demand for the finished article, powder, slab, fancies, in the home trade. If this is so, then this country is a good customer for West African cocoa. It should be, but is not, an equally good customer for West Indian and other Empire cocoas. One fears it never will be, unless those producing centres do, as the Continent has done in the U.K., club together and arrange to have their beans—best beans every time, please—made up by a reliable firm or firms over here and sell the choicer manufactured article against the present range of qualities on the market. What the Continental manufacturers can do over here—and how many are running their own factories—surely our Colonies can do, whole communities against private enterprise.

Let us get back to our usual table of the Board of Trade Returns of the movements of raw cocoa in the U.K. Taking August alone our Home Consumption deliveries amounted to 4,408 tons, against 3,341 tons last year and 2,719 tons in 1930. It may be as well to remember that with the two previous years this country was still on the Gold Standard, which we did not drop until September 21st last year. Now for the Returns:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY-AUGUST—RAW COCOA ONLY.

EIGHT MONTHS JAN.-AUG.	LANDED TONS	INCL. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK AUG. 31 TONS
1930	49,463	46,733	36,736	2,058	41,000
1931	54,716	51,153	38,356	2,525	41,400
1932	52,587	49,753	44,203	1,868	35,350

Dec. 2,129 Dec. 1,400 Inc. 5,847 Dec. 657 Dec. 6,050

From a market point of view, therefore, these returns are excellent. Imports down, deliveries up, stocks down. Allowing for a certain amount of change in methods of buying by the manufacturers, one feels bound to compare the fate of Mincing Lane as a cocoa market with that of the almost dead and desolate Cardinal Wolsey and say, "If the Lane had served and worked for the producing and selling side of the cocoa industry half as keenly, as they strove to please, almost toady to, buyers as regards suppressed reports of sales, the Lane would still have been the centre of a good deal more trade in cocoa than it is to-day." Holders over here and planters abroad when in London have all along claimed that had London been willing to blaze sales, especially good ones, instead of burking them, especially the good ones, Mincing Lane might still be doing well. The brokers of course claimed to know which side their bread was buttered and so the sellers did not flourish and the Lane has become what it is to-day, without the bread to be buttered in many cases, although the turnover in cocoa, at least for Home Use, is double what it was. This being so, what a pity that Mincing Lane cannot get more of the trade.

Butter in Manufactured Cocoa.

There is one paragraph in the Imperial Economic Committee's report referred to at the start, and that is the following reference to "Degrees of Fat Content in Cocoa Powder" (see par. 177, p. 65), which runs: "In paragraph 162, we showed that to make a palatable drink some of the cocoa butter is pressed out of the bean. In the case of good quality cocoa powders manufactured in the U.K., the proportion of cocoa butter remaining in the powder is still from 20 to 30 per cent. (out of possible 54 or 55 per cent. H.H.S.). While the theobromine and other stimulating properties of the beverage prepared from cocoa are contained principally in the dry cocoa matter of the powder, the nutrient properties depend on the amount of the cocoa butter present, and recent research has also indicated that while some degree of butter extraction is advisable, cocoa powders with a medium proportion of cocoa butter such as that usually present in good quality cocoas are more easily digested than powders which are poor in fat content. . . . We recommend that whenever the butter content of cocoa powder offered for sale is below a certain minimum, the actual percentage should be declared in such a way that the purchaser knows he is buying a cocoa of low fat content."

Planters, especially of the better-than-African kinds, should note this paragraph and make the most of it; if they do not, they must not grumble (1) if the ton of their beans takes longer to con-

sume than they like, and (2) if the public turn against cocoa as a beverage and say . . . disagreeable things about it. On the other hand, if properly prepared, it could come back into favour as when it was the rage in the early days of the "Cocoa Tree" and other clubs. Talking bluntly, the writer of these notes claims, as he has always claimed, that cocoa without all its fat is not worth drinking. To say it is insipid is to be polite to it; but to drink it with all its fat, trouble must be taken in its preparation and that, apparently, outside a club or a restaurant, is not to be thought of. Why not? If men are paid big salaries to prepare food to eat and cocktails to drink, why should not they, or women if men do not like the job, be well paid to prepare ideal cups of cocoa or chocolate? There is one woman expert, with a widespread experience of restaurant work in London, who has all along claimed that she could make the drinking of cocoa and chocolate popular, given the chance to prove her claim. Why not give her that chance? There are plenty who know of the experience she has had and the case surely has been discussed in print before. If you want to do trade in these days you must give the public what they want, especially the better-to-do public. Can it be claimed that the public has what it wants with cocoa as a beverage? We must say "No, certainly not." This being the case, is there no one ready and willing to come, at least

partly out of their present rut, and strive to give the public what it wants? Tobaccó is advertised as being of three strengths, mild, medium, strong. Cannot cocoa powder be advertised for drinking as containing up to 100 per cent. of its total butter, leaving any one of the public leading an active life to find out that the cry of butter being indigestible is all a myth. The Economic Committee's report practically says so, it would have said so entirely if the trade had been balanced by independent experts who believe in butter as having the necessary vitamins to nourish the body and counteract any effect of heaviness which, with active people, stimulated by the theobromine, is not noticed even in the tropics. There are latent energy restoratives in all-butter cocoa powder and this comes in useful in the tropics; it will do so in this country if the public are trained to make the trial.

Of course there is the big question of flavour. How many kinds of sandwiches do some bars claim to make, or how many mixtures go into the cocktail shakers? We believe fifty, if not a hundred, but even say a dozen. Why not, for one year, run cocoa and chocolate buffets with three percentages of butter content and a dozen different flavours? If it proved a dead failure, as it will if the wrong crowd get hold of it, the cost would be insignificant compared with the increased trade that will result if carried on to a success. Certainly such a trial should be made.

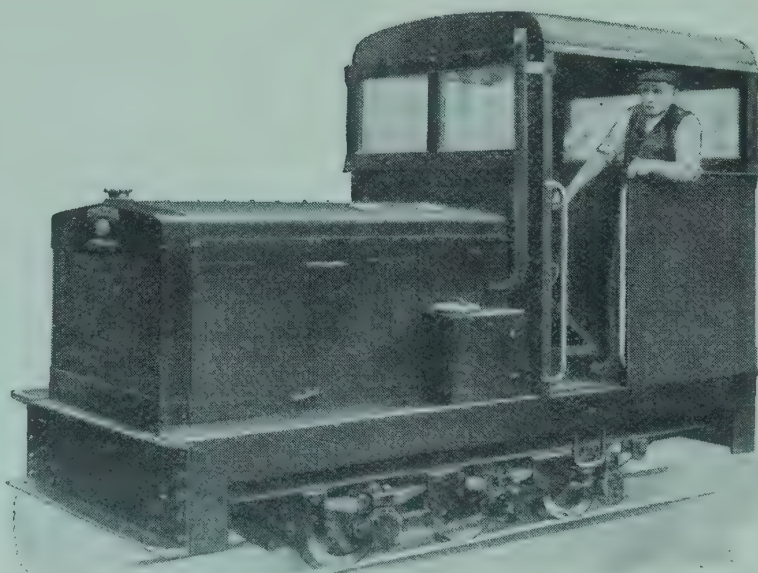
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STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ "
20/36	2½ "
20/36	4 "
32/42	5 "
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IN TOUCH WITH EVENTS

At the Annual General Meeting of the Cocoa Association of London, Ltd., on Mr. H. F. Methven retiring from the chairmanship, Mr. D. Wallace of the merchants' section was elected in his place for the ensuing year, with Mr. Horace H. King as Deputy Chairman, whilst Mr. Charles Howe, of Messrs. Paines & Reid, was elected a director to represent the brokers' section on the Board.

* * *

At the above General Meeting of the Association the chairman called prominent attention to the services of their secretary, Mr. W. W. Piggott, who, in spite of being very busy always, has never failed to give the Association his best services, saying: "We are all much indebted to him and his staff for the ready and willing help that we have always been able to look for from them."

* * *

A very kindly friend of TROPICAL LIFE recently died in the person of Sir William H. Mercer who, on more than one occasion helped us with his advice and knowledge whilst Senior Crown Agent for the Colonies. His knowledge was both deep and wide and we only wondered, but never asked, how he came by it. Now we know that he served men like Lord Jersey at the Ottawa Conference in 1894, and finally Mr. Chamberlain, we no longer wonder.

* * *

Apart from one or two hopeful features, the Trade Returns for September are considered to have shown no improvement in the industrial situation. One encouraging feature was the increase of nearly £1,000,000 under the head of raw cotton imports.

* * *

The Hon. Katherine Plunket died on October 14th; had she lived until November 22nd she would have completed 112 years. *Sic transit* a most notable member of a notable family. Her father, Baron Plunket, Bishop of Tuam, was born in 1792, immediately before the great "flare-up" of the French revolution, whilst the daughter was born in 1820, shortly before the death of Napoleon.

* * *

"I will content myself by giving you one or two comparisons of prices in the London market

for certain articles which bulk largely in the exports of South American countries, asking you to keep in mind that prices at the end of June, 1932, as compared with those of 1914, would, in theory at any rate, have been still lower had this country not gone off the gold standard.

	END JUNE, 1914	END JUNE, 1924	END JUNE, 1932
Wheat, per qr.	35s.	49s.	23s.
Maize, per qr.	22s. 6d.	34s. 6d.	17s. 9d.
Linseed, per ton	£12 15s.	£19	£7 9s.
Wool, per lb.	10½d.	21d.	5½d.
Cotton, per lb.	7¾d.	16½d.	4½d.
Copper, per ton	£60	£61	£26
Tin, per ton	£138 10s.	£225 10s.	£114 15s.
Silver, per oz.	26d.	34½d.	16¾d."

The chairman, Sir Bertram Hornsby, at the 44th annual general meeting of the Anglo-South American Bank.

* * *

At the Chiangmai Leprosy Home in Siam, local self-government has been established, patterned on the Siamese form of village government. It has proved a perfect success. In this Home, with its 400 patients and 140 buildings, the inhabitants are divided into three distinct groups, under a chief headman or mayor elected by themselves, with the result that the inmates have been changed from patients, worse still from outcasts, to citizens.

* * *

Judging from the investigations and experience of leading leprologists in Argentina, leprosy flourishes best in the dampest and hottest climates following the course of rivers. Areas bordering on the Parana River seem an easy first in the number of known leprosy cases.

* * *

In Finland official returns claim that the reaping machine is not to be recommended for oats as the blades spoil the grain. Of the entire time employed when working reapers, the returns claim that 90.8 per cent. was taken up by the actual reaping and 9.2 per cent. in turning the machine. This compares with 78.3 per cent. of time when actually using a scythe and 21.7 per cent. by pauses. The man with the sickle devotes 90.4 per cent. to actual work and 9.6 per cent. to pauses. If these pauses refer only to periods of rest they are still wonderful, but if they include the time taken up with sharpening the sickle we feel they cannot be correct unless

several sickles are used and the sharpening is done after hours. This however, we feel, was not meant.

* * *

Our Australian readers interested in wool probably know already that in Manchuria the Japanese are hoping to increase the present stock of sheep, reported to be about 9,000,000, to a much larger quantity. Their idea seems to be based on the establishment of three large breeding centres containing thirty million sheep, meaning, one takes it, 10,000,000 animals at each centre. With the increased amount of wool thus obtained it is hoped to be able to reduce wool imports into Japan, which now are said to run around 50,000 tons annually. "To reduce imports into Japan"; must we take it from this that the areas, at least where those sheep-rearing centres will find themselves, will be considered Japanese dominions as Puerto Rico with its sugar is considered to be U.S. territory?

* * *

Foxes' milk seems from analysis to be much richer in protein, fats and phosphate of lime than other milk, hence apparently the reason of the high mortality among foxes reared on the milk of cows and other animals. This knowledge moves one to ask, since fox farms have become well established, in order to stabilize the supply of silver fox fur, whether in emergency cases of malnutrition with "humans," foxes' milk if obtainable would be beneficial to the patients. Furthermore, since doctors or hospitals cannot have fox farms sufficiently extensive to give adequate supplies for such emergency cases tucked away near at hand, whether the milk would lose in value if dried, or otherwise preserved in a way that would permit it to be transported in, what must be, small glass or other receptacles.

* * *

Quoting from the *Zentralblatt für Bakteriologie*, 2. Abteilung, Jena 1932, No. 85, p. 339-348, the Institute of Rome tells us in respect to the retting of fibrous plants that the experiments carried out by M. A. Makrinov on fibrous plants and in particular on flax, have led to the following conclusions:—

Under the action of a stimulating anaerobe (*Granulobacter pectinivorum*) the pectins do not finally give products of oxydization; formation of butyric and acetic acid is observed, with a slight deposit of carbon anhydride and hydrogen. By fermentation, under the action of a stimulating aerobe (*Pectinobacter amylophilum*), the greater part of the pectin is transformed into completely oxydized products, 25 per cent. only being transformed into acetic and formic acids. The high oxydizing capacity of stimulating aerobes causes oxydization of the pigmentary substances and extractive matters of flax, together with blanching of the fibre, while with stimulating anaerobes the

fibre remains black. The use of the *Pectinobacter* makes it possible to ret the flax several times in the same liquids, thus increasing the strength of the retting up to a certain intensity which is maintained for a long period and afterwards decreases. This repetition of retting in the same liquids is only possible with *aerobic* stimuli of the pectic fermentation with fixed biochemical characteristics.

All this alas! is beyond us, but since we all know to-day that so many tropical crops have to be fermented, or whatever the correct process and name is, such highbrow explanations are well worth keeping by one until some kindly soul can be induced to "translate" it into more intelligible terms for us more ordinary mortals.

* * *

We see by the *Bournville Works Magazine* that, speaking at the George Cadbury Hall, the Rt. Hon. H. B. Lees-Smith quoted the unemployment figures for this country as follows:—

PRE-WAR (ESTIMATED)	1922	1924	1926
700,000	1,500,000	1,100,000	1,700,000
1928	1929	1930	1931
1,300,000	1,100,000	2,000,000	2,800,000

He then went on to analyse the latest figures under the following trio of causes:—

25 per cent. due to normal working of the industrial system.
25 " " due to post-war loss of export trade.
50 " " due to the World Economic Crisis.

In many countries, he said, this last cause accounted for a much larger proportion, and the first task, therefore, was to get back to work those who were unemployed owing to that factor. Many political phenomena, such as the growth of the Nazi party in Germany and revolutions in South America, were also attributable to this.

* * *

We congratulate the management of the Prince of Wales Theatre on the team work of their Lawrence Tiller girls, it is really marvellous how so many of them—is it twenty-four?—move, high or low, together in such exact time. Their clatter dancing was particularly attractive and caused one to wonder if they had wood on the soles of their shoes: Miss Dora in the Russian skating scene was pleasant to look at and watch, she interested you without being too crazy and causing you to fear lest someone got permanently injured. We have always understood that the stage is noted for showing fashions in advance. If this is so, then suppliers of fibres for wearing apparel, viz., raw cotton, wool, silk and even of artificial silk, had better take to shoemaking as being the only article of apparel that will be in demand, and this, no doubt, is why we have just been asked 32s. 6d. for boots which looked strangely like those we paid 16s. 6d. for before the War. If you think you misunderstand our meaning with regard to the cause of the low price for raw cotton, &c., then go to the Prince of Wales Theatre and see if you do not agree with our views.

HERE AND THERE.

Monarchs and Money-making.

ONE of the leading diplomats—perhaps the leading one so far as popularity goes—in this country and Europe until recently, writes as follows concerning our leading article in the last issue under the above heading:—

"I have read your article on 'Monarchs and Money-making' with all due attention and am much impressed by its soundness. How strange that mankind cannot settle on a form of government acceptable to all so that every citizen may spin his web of life in peace. England seems to be the only country whose people have understood how to preserve in Monarchy the essential factors of Stability, Justice and their child Security, while allowing the voice and will of the nation to make themselves heard with proper moderation. Your article shows how desirable is such a consummation, or, should I say, combination, in every land as the only solution to the political problem which is that of everyone's daily life. In my humble opinion, because you have so graphically and attractively expressed yourself concerning a great truth, a fundamental but ignored factor of social life is called to do, and should do, great good among your neighbours. Thank you very much for sending me a copy of the article. I hope that your 'plucky' and able proclamation will produce the wished-for and very desirable results. I send sincere wishes for the continued success of TROPICAL LIFE."

* * *

The *Morning Post* in its issue of September 28th, gave up considerable space on the Leader page to an article by Ignatius Phayre entitled "Is Brazil Breaking up?—Chaos in a Republic Bigger than Europe." In the centre of the article was a map with the British Isles inset to show how many times larger Brazil is than them. It would seem as if these islands could be packed into the "leg" of Brazil occupied by Sao Paulo State, Parana, and Rio Grande do Sul, and leave the rest of the country to eat up Europe. The author considers Rio to be the loveliest city on the earth and calls Manaus a jungle-town, in spite of its Opera House, stated to have cost £500,000, and the Palace of Justice, on which £750,000 was spent.

The gist of the article is that Brazil, on account of its immense area, lacks cohesion and united effort to go ahead; and so threatens to break up into a number of independent States. (On this point turn to our leading article "Monarchs and Money-making" in the last issue.) Up to now truly "wild" natives, driven into the dense forests, offer at once a menace to individual progress and a bar preventing the Republic becoming as one. This is why Sao Paulo has for so long

been protesting against the exploitation of her riches (rubber up north being as dead) for the benefit of a loose and sprawling "Brazil." It reminds one of the history of France, where the true Franks, ensconced on the Seine island now known as "The Isle of France," would sally on to the mainland and raid, fight and conquer until their influence and name spread throughout the country. Will history repeat itself along such lines out in Brazil?

* * *

In sharp contrast to the state of affairs in Brazil, where things stagnate rather than drift, the Rt. Hon. W. M. Hughes ("Billy" of the "Tales of the Trenches"), Prime Minister of Australia from 1915-1923, that is through the war and after, wrote on "The End of Drift—the Beginning of Vision" with regard to Australia, the Empire and Ottawa. One notes this very loyal Australian puts the name of his country first. "Hitherto," he tells us, "the Americans have catered for the Australian markets much more effectively than the British."

* * *

It is not generally realized that Canada has a larger tourist traffic than any country in the world. All the same, everything points to this being the case, as from its southern border alone come a million of visitors every year "to live," thanks to the contrast in Canada's manners and modes as well as to the splendid scenery and the unrivalled opportunities for sport. Now, with so many straws pointing to bigger trade within the Empire, one hopes many thousands, if not a few millions at first, from elsewhere within the Empire will also betake themselves to Canada to see the sights and increase the trade between visitors and visited.

* * *

West Africa, when reviewing the "Life of Mary Kingsley" (Macmillan Ltd., 12s. 6d.), by Stephen Gwynn, concludes by saying: "A West African Council in England, in close touch with another in Africa, composed of Chiefs, and over the whole a Governor-General dividing his time between the two countries, was this high-hearted, statesmanlike Englishwoman's desideratum for West Africa. Whether or not this be the precise form which development will take remains to be seen, but certain it is that the spirit of Mary Kingsley's policy for West Africa can work out only for the enduring welfare of West Africa and of Great Britain, and both owe Mr. Stephen Gwynn a debt of gratitude for his eloquent reminder of it."

East Africa.

The War on Coffee Pests.

As ever was, recent issues of the *East African Standard* remain a terror to the busy man anxious to keep his mind and his time to himself. Woe to the unwise who opens one when demands for "copy" are in the air. The excuse that you are looking for a report to confirm certain views one may be writing about makes no difference, and so the paper is pitched on one side (but nowhere near the W.P.B.) and work continues.

All the same, in their issue of July 16th, we noted some useful illustrations, p. 25, on cultivating the land for grass crops and the benefits from doing so, and pp. 31-32 in the Agricultural Section are devoted to an article on the subject under the giant heading "Grasses as a Crop—necessary steps to bring grazing under proper control," Captain Allen, of African Explosives, Ltd., being the author. Read in conjunction with the article on "Arable and Grass Lands" that we published in the June issue, those who wish for information on the subject can learn much in a little time.

Before the war we specialized in articles dealing with the use of explosives in agriculture, contributing articles to the Dry-farming Congress in America and to various contemporaries at the time. In 1912 we visited the Nobel factories at Ardeer in Scotland to help clinch the purely theoretical side of the work, and altogether acquired a good deal of information on the subject. As a reward we look with pride to a collection of (dummy) explosives—now twenty years old—on our mantelpiece.

Coming to coffee, we found an article *re* pests, in which one sentence was on a level with several articles and reports elsewhere. From p. 36 we learn that Mrs. Elinor Mordaunt, the novelist, who was visiting Kenya in July, considered "that coffee in Kenya is being more neglected and left in more incapable hands than any other industry." Such a claim surely is undeserved, unless it means that every crop is well cared for and in capable hands. One would like to have seen the face of Capt. Leslie Elmer and his colleagues up at Kitale when he read these views, thinking not only of himself and his district but of Kenya and perhaps East Africa as a whole.

Having been through that single issue of the "E.A.S." we had not far to look for the where-with, politely but pointedly, to contradict these views of Kenya's visitor. Had it been sisal which was found to be neglected at present prices no one could be astonished, but since with sisal the rule seems to be "the worse the price the greater the attention," we find it difficult to believe that coffee in Kenya is not equally well looked after. The "E.A.S." under notice confirms this with such articles, reports, and letters as:

"Ravages of Coffee Berry Disease"; deputation to H.E. the Governor, who recommended that no less a scientist than the Director of the Amani Research Station (Mr. W. Nowell, C.B.E.), and the senior mycologist (Mr. J. MacDonald) should tour the districts where trouble is being encountered. On p. 39 is the report of Dr. le Pelley's paper on the capsid bug (*Lygus Simonyi*), with detailed recommendations for combating this trouble. We have cut out the report and stuck it in Mr. MacDonald's book on "Coffee," together with a long letter on the subject, from which we will take the following: "Referring to Dr. le Pelley's lecture, my suggestion was that a sort of large fly-paper be made by smearing thinly over brown paper or three-ply wood a layer of Cooper's banding grease or any other sticky substance. This should be done on two large sheets which are then laid on the ground under the tree, one on each side of the stem and overlapping. Dense smoke should then be very thoroughly pumped into all parts of the tree and note taken if and how many of the bugs drop from the tree on to the fly-paper. It is no use merely allowing the smoke to drift into the tree from a *debe* as with *Antestia*; this merely makes them crawl to the centre, but, if sufficiently disturbed, *Antestia*—and, I am told, Capsid has the same habit—drop to the ground like stones."

At the lecture, spraying with a kerosene extract of pyrethrum was strongly recommended. This spray is an extract of 1 lb. of powder from Kenya-grown pyrethrum flowers in a gallon of kerosene and is applied undiluted to the tree by a small atomizer under cover (the tree being covered over) to retain the volatile mist formed by the spray. There is much more to say, but surely we have said enough to make one wonder how Brazil fares with its millions of bushes if Kenya's coffee is not receiving as much attention as it should.

Official figures from America claim that, taking the world as a whole, no less than 185,000,000 people visit cinemas every *week* including 90,000,000 in America (say one-half of the total) and 30,000,000 in this country. One would like to know what the average price per head per visit amounted to. Leading palaces of course get leading prices, but even put the average at 6d. per head, this means that the baby among our leading industries of to-day requires and obtains, at least, some £4,625,000 per *week* to fill its bottle of milk. No wonder other industries which run alongside, if not counter to, cinemas, including the cocoa, chocolate and confectionery trades, find sales slow at expanding and buyers rather picky when they do come along. How many more would come, one wonders, were there no cinemas?

EMPIRE SISAL.

What About Production on Large Scale Plans?

IN the notes under "Our Friend's" (none too-satisfactory) portrait in the June issue, we spoke of hopes that some system of group controls will ultimately be developed along lines to help lower costs and yet increase the output per man and per acre, and thus improve everyone's chance, the smaller estates especially, to hang on till better times arrive. Even then there is no reason why they should not be in a more assured position to "make things hum" than they can ever hope to be if they continue under present conditions. At the time, we had the following notes on the matter which Mr. Harrison had sent us, but were unable to give up as much space to reproduce them as they require and deserve. As it is they ought to have been divided into two if not into three parts. When complete, the claims advanced in favour of the large-scale production of sisal should be compared with Major Notcutt's views along similar lines as discussed in his "Sisal Economics" (price 7s. 6d., illustrated, post free) published by us some years back. Coming to the views on the subject of the Director, Department of Agriculture at Tanganyika (Mr. Harrison), they run as follows:—

There is some talk of the rationalization of the sisal industry. This appears to mean the amalgamation of estates and the establishment of larger factories. Where estates are some considerable distance apart it is felt that the additional costs of transport of the leaves will offset any savings in overheads from factory concentration. Even where the estates are near together, the terrain may preclude amalgamation. All the same, with modern improvements in light railway equipment much more can be done than most people can credit. Such rationalization as I foresee it, can take place only if certain equipment is provided and certain research work in the treatment of recovered fibres is carried out, and the recovery of fibres generally is made more efficient. Meanwhile, let us note the following:—

(1) Crude-oil lorries and crude-oil tractors of the track type with power take-off are now or will be available in the very near future.

(2) Engineering research into improved recovery method is being conducted with every prospect of success. This in itself will go a long way to combat low prices, but will react favourably also on the recovery of all competing fibres.

Technically I think we are half-way on the road to rationalized sisal fibre recovery.

I can visualize further developments, such as:—

(a) A large sisal laundry and balery serving an area of say 1,500 or more square miles of country.

(b) A system of roads serving that area.

(c) A development of small scale wet fibre producing estates within the area served by the laundry.

(d) A systematized field practice with field fibre recovery not necessarily with a portable, but with a movable scutcher moved every year or at long intervals to places economically situated in regard to the cutting areas, dispensing with mechanical leaf transport. Leaves are now carried out to headlands for transport, but it will be possible to carry leaves direct to the machine by hand. The average distance a leaf may be carried on a 150/200 ton plantation is 500 yards, if that plantation is suitably laid out in a 6-year rotation system. The more portable the recovery plant the shorter the carrying distance, and the larger the plantation within the limits of the capacity of the field machine. With a 600-acre sisal property one visualizes the moving of the plant twice in six years, also that in every way and for any distance endless band transport can and will be made use of unceasingly. The subsidiary or small plantation within the zone of the sisal laundry demands the following consideration:—

That sisal may be decorticated with little or no water for washing and transported to arrive at the laundry within 9/12 hours of decortication. We know that sisal tissue and juices in contact with sisal fibre for this length of time, even if the wet fibre is kept in wooden boxes under shade, will cause discoloration of the fibre. The extent of deterioration of fibre strength has not been determined, but it is known to be slight.

Why is it that sisal for the market requires to be cotton white? Is it essential or is it a pure fad? Whichever it is, the fact remains and is likely to remain that the whitest fibre sells best and quickest. There may be two markets at low prices for discoloured and cotton white sisal; if not existent the new one may be created, especially when No. 1 grade is below £20 a ton.

Research is needed on the chemical addition required to check fermentation and, if necessary, to achieve bleaching without fibre deterioration. We know that to-day whiteness in sisal in East Africa is achieved by a brute strength method of recovery with simultaneous profuse washing and subsequent sun-drying under risky conditions.

So far as the experiments made by the Department of Agriculture at Tanganyika go, we know that in this field a rapid examination of the situation by a chemist would or should indicate some factory practice, in rectification either at the time of decortication or at the laundry. This aspect could well be worked out at Amani.

It is always presumed that the sisal that the market requires to-day must be the sisal needed in the future, but there may be some adjustment, if only on account of low prices, and it is felt by us that empirical standards have always operated in

the market. Is any other commercial fibre of the type of sisal sought for in a snow white condition? * Does not the real value of sisal lie in its fibre strength and length? One does not forget the possible value of sisal to the rug and stairway covering industry. Have any trials been made in dyeing sisal?

We are convinced that any method which will cheapen sisal production, and which will guarantee buyers against too high a rise in price, is likely to enhance demand and encourage new uses for the future, leading to the extension of the industry. It is felt that any talk of a return to relatively high prices for sisal will deter the commercial exploitation of the fibre for other uses and leave it in the position of a minor fibre industry.

One snag in all this to a sisal producer is "How are we to know the actual fibre content of wet fibre deliveries at the laundry?" That figure can offer no obstacles if there is a pilot check plant.

In all matters connected with rationalization, there must be a check, i.e. tests *en route* of the product. The sisal industry can arrange these in consultation and by experiment. Furthermore, test runs from the nucleus or balancing area attached to the laundry should have given the necessary data long before the co-operative producers are sending in wet fibre.

I have put up the foregoing for criticism and analysis and to engender research in the economies of production from recovery to baling, but surely the advantages of a centralized laundry and balery need not be dwelt on, they are manifest.

I merely wish the whole organization to be thought out and the necessary research to be carried out to see whether the sisal industry can be reorganized on the basis of the one man producer, or contrariwise on the basis of colossal estates with extensive field interests and field recovery, helped perhaps by sisal farmers similar to the cane farmers who grow the cane and sell it according to a price scale to the factory. We have yet to see whether sisal can be produced only by huge corporations owning extensive lands and cultivating enormous fields with one enormous recovery plant or a larger number of field plants under *employés*. A large number of small producers

combining with a parent concern will be a safer proposition, and possibly cheaper in the long run, than the huge corporation envisaged in the 5,000 ton producer—the capital to begin with is spread over more interested parties. It is always possible for a small producer to develop other subsidiary forms of production which help maintain him and his estate, and further there is the personal interest taken in the land and the crop. Sugar is produced on these lines in Natal and Zululand with growers under contract to central mills.

In addition, I foresee the use of a crude-oil tractor as the power unit to be run at a low cost which can be used in periods of no production in regeneration of sisal areas. The minimum unit I had in mind was 600 acres of sisal in 100-acre blocks from 1 to 6 years of age, the shape of the lay-out to be a rectangle, twice as long as it is broad giving two optimum centres of position for the recovery plant once every three years. This lay-out may be improved after calculation re clearance and regeneration in the sixth year, etc. The preliminary establishment of the plantation may be carried out possibly by one man developing a group of three field units, bringing in a second man at the end of the first year and a third man at the end of the second year so that three units would come into production from 100 acres each in the fourth year.

These men could produce cotton as a straight and interplanted crop until the unit became a cutting unit over three 100-acre blocks in the sixth year. It might be possible to work out a system for up to 8 blocks of 100 acres each with a cotton fallow in between regeneration or to close up the sequence by inter- or pre-regeneration. Climatic conditions will render the system inaccurate in point of time but, on the whole, it should work out on a six, seven or eight years' course.

If we can find satisfactory answers to these and other essential requirements, a sisal area in the future may be established in this way. Alienate at low rental, say 10 cents per acre, 120,000 or more acres and you have a cultivable area of say 55,000 acres.

Set aside 5,000 acres as a balancing area for the laundry and its attendant scutching plant.

Divide the remainder into 1,000/2,000 acre blocks to give an arable area of up to 700 acres of land per block. Lay out a system of roads, put in a water supply or a series, or have boreholes. Water will be needed at the houses and for the labour and may be needed for field recovery plants. This done, then one must look round and induce people to study the plan from A to Z with the idea of purchasing blocks or rather to develop them and co-operate with the parent company. Large-scale development of this nature has been indicated as one of the satisfactory methods of land development in this territory.

* May the Editor here repeat a story that he has told many a time. "In the 'eighties he ordered from Messrs. Frost Bros. (with whom his father dealt for twenty or thirty years) some extra white sisal cordage to be spun dry, i.e., without oil, so that it would keep as white as possible. By chance he went out to the tropics almost at the same time as the cordage, and was at the store when a donkey transport driver from the country districts came in and ordered two lengths of rope for tying on his load. All the time the man was saying 'not white enough,' and yet, when he had made his choice, he actually was dirtying the end of one piece by rubbing it (through treading on it) with his feet on the floor, whilst grumbling at the lack of whiteness at the other end. Finally he went off in a great hurry and lashed on the loads in the somewhat muddy roads and further dirtied both lengths, and this is why, thought our Editor we all slave to get white sisal cordage."

False Economies with Rubber.

WITH rubber around 3d. per lb. here, equal to 4 cts. only in America, the question of needless expenses on such prices has naturally been much to the fore of late and has caused such stringent economies to be insisted on that the remedies tend rather to aggravate the disease. To reduce freights, abominably high may be, it can do the shipper no good to over-press, say, seven bales into the space measurement of five. What can such rubber be like when opened in the factories? It probably pays to cut it up and rework it instead of stripping it off; but what a needless expense. Then take the cases, or rather let us first talk of no-cases, i.e., of baling rubber, parcels probably already over-squeezed as described above. How many tons can possibly and will probably, gently but assuredly, be again brought into contact with, and further press-pack, those bales unprotected by a stiff covering on the way home or whilst stored. All this tends to further trouble and cost in the manufacture of the finished article and the lowering of the bids next time for that brand of rubber. Last but not least the question of splinters. Where do these come from? Rough sawn cases when the rubber is repacked in London, or local wood cases, Japanese or otherwise, like the old-time tea chests which produced the most awful splinters known, like the plate glass ones from the shop-front windows after an air raid. A Luralda chest to hold 120 lb. rubber, we believe, costs about 20d. on the estate, that means one penny to pack 6 lb. of rubber. Can there be a single splinter in these cases? If by some miracle there is, it will be from the planed battens top and bottom. To avoid such a risk these battens can be papered, we believe, at a cost of a farthing a case. One-sixth of a penny per lb. for the case, and the one hundred and twentieth part of a farthing or even a halfpenny to be over-careful *re* splinters; such an expenditure must pay in the end if only because the rubber so sent puts the factory to less trouble and expense. This causes them to buy marks or brands sent packed in this way in preference to others, perhaps even giving a little more for them, enough at least to pay the sixth of a penny per lb. for the splinterless wood case, leaving the cost of the safeguarding paper to act as the bait which draws orders away from those using non-papered boxes.

The large British interests in the teak industry of Siam, Mr. J. M. Ryrie, as chairman of the Anglo-Siam Corporation, told the shareholders, are going to suffer from the new preferential duties and, having regard to the duty of 25 per cent. on shipments to India and with the additional advantage which Burma enjoyed in the matter of exchange, the marketing of Siam teak was not going to be easy.

In America, we are told, so confident are people that the drinking of light wines and beer will be made legal next year that breweries have already begun to repair their tumble-down plants, while clubs and private individuals have sent representatives to France and other parts of the Continent to gather together a cellar for importation into the United States as soon as the Volstead Act is modified.

When the Volstead Act was first seriously considered and certain to be put into force, great hopes were engendered that the demands for sugar, as soft drinks, candy, &c., would increase enormously. This hope was not satisfied, but if America returns to reason, i.e. not intemperance and saloons, with the exit of prohibition, one feels that the present demands for sugar can well continue and additional orders come along from the brewers and others who will benefit by the repeal of the V.A.

* * *

Maize growers in East Africa and elsewhere may be interested to know that according to the international statistics published by Rome on August 1st, the area in the U.S.A. under maize was returned as being 108,609,000 acres, against 105,100,000 last year, giving a crop proportion of 77.4 against 76.3 in 1931. With regard to the crops we are told that in the principal European producing countries the copious rain in the latter half of July greatly favoured the maize crop, of which the condition at the beginning of August was very promising. On the other hand in the United States the dry hot weather that prevailed in July caused deterioration and the crop estimate based on the situation on 1st August is 99 million centals (176 million bushels) *below* that of the previous month. The estimated production still however exceeds those obtained last year and on the average of the five years ending 1930 by about 10 per cent. In the first fortnight of August the weather was fairly favourable and crop condition was ameliorated.

The production this season is put at 2,820,000 bushels (1,579,200 centals), against 2,563,271 bushels in 1931 (1,435,432 centals) and 2,573,817 bushels (1,441,334 centals) as the average crop for the five years 1926-1930.

Discussing coconuts in Siam we are told that these trees grow well in the eastern and southern regions of that country. Unfortunately the parasites which have already destroyed the earlier coconut groves of the environs of Bangkok, are extending their depredations to the east and have already devoured whole plantations. Cannot such depredations and losses be checked?

The coconut trees belong to Siamese capitalists. Their average yield is 45 nuts per tree per annum. A number of dwarf palms are to be found throughout the country, but there is no special cultivation of these. One wonders why.

Man and Medicine in 1932.

IF a visit to the 1932 London Medical Exhibition, held in the New Hall of the Royal Horticultural Society, Westminster, suggests that in this perhaps too complex modern civilization, the human body often fails to meet the demands made upon it, it also provides comforting indications that medical science is able to succour where help is needed.

Digitalis, or the common foxglove, was used for generations in certain heart diseases. Preparations of the herb, however, always lost their activity. It has now been found possible to prepare a stable solution, described as "Diginutin," which never varies in strength. The exact dosage can thus always be maintained. This advantage is obviously of great benefit to patients. The most recent refinement is "Tabloid Diginutin," which can be carried in the waistcoat pocket or handbag.

In the bad old days, if a road accident occurred, those concerned had their wounds patched up and they were left to take their chance of the terrible forms of flesh mortification known as gas-gangrene. Now the physician injects Anti-Gas-Gangrene Globulins, thereby eliminating the danger.

People to-day are more interested in diet than perhaps ever before. Vitamins are "in the news." However deficient meals may be in these essential principles, an adequate supply of three of them—vitamins A, B and D—in their natural form and association can be ensured by means of "Kepler" Cod Liver Oil with Malt Extract.

Our parents and grandparents often referred to a common disorder of digestion as acidity. Another form of acidity, and, though less obvious, almost equally prevalent, is now described as acidosis, which is the result of an excessive production of acid within the body. Acidosis may be corrected by the use of some specially designed preparation, such as "Tabloid" Alkaline Compound, Effervescent, which provides alkali to the system and not, like ordinary antacids, to the stomach.

A section of the Exhibition proves how much human effort in travel and exploration is dependent, for its success, on medical science. Explorers, until the introduction of portable "Tabloid" medicines, were menaced more perhaps by fever and pestilence than by dangers from the savage inhabitants of the jungle. Nowadays, thanks to "Tabloid" Medicine Chests, medical supplies for an expedition can be carried on the shoulders of one man.

Last month our notes on sisal stood aside to allow the article on vegetable oils to be included, so the sisal article has been published complete this month, leaving the vegetable oil notes for December, which number will include an illustrated article on Egypt.

Where France Leads.

WHERE is the "Great Eastern" now? Will its ghost hover over Saint Nazaire on the day we go to press, when the giant super-liner the "Normandie" is launched at that port. With an overall length of 1,027 feet, five times the height of the Monument, and an approximate gross register of 75,000 tons, this, the latest and biggest of the ocean giant greyhounds will require one ton of soap, two and a half tons of lard and forty-three tons of tallow (how much money will all that cost, especially if the lard is all fat and not household lard, mainly water?) for use in the launching.

Reports point out that the impetus which the ship gathers descending into the water will force the stern in to a depth of 49 feet, or only four feet above the bed of the sea. The rudder, if stood alongside the Mansion House, near the Bank, would be exactly level with the roof. So large a vessel has been launched to place France not only alongside other countries as regards ocean travelling but to put her in advance for a time. A technical advantage also lies in the fact that, power for power, the longer a ship is (all proportions for strength and resistance to steam being maintained) the greater is the speed. It takes 25 per cent. less power per ship ton for a ship 1,000 feet long to do 28 knots than it does per ship ton for a vessel only 750 feet long. A longer ship therefore can attain the same speed as a shorter one without putting her engines to the same strain. This implies economy of running and upkeep.

Hence, points out the *Morning Post*, the alleged reason for the palatial "Normandie" with her 75,000 tons and her passenger capacity of 930 first-class, 680 tourist, and 560 third-class, and how many more for the crew complete. Of course, pride of race and achievement has not entered into it all.

With her "Robot" locomotive France is also to the front in railway work, since what is described as the most powerful railway engine in the world has been completed at the works of the French State Railways at Sotteville-les-Rouen. The "super-mountain," as it is called, can develop 2,800 horsepower and will be put into service between Paris and Havre, Paris and Brest, and Paris and Cherbourg. The engine practically runs itself, nearly all the controls being automatic. It even replenishes its boiler fire when necessary with the requisite amount of coal.

The firm of Stora Kopparbergs Bergslags Aktiebolag, of Stockholm, the *Morning Post* tells us, was stated in the Court of Appeal to be the oldest trading concern in the world.

Mr. Cyril Atkinson, K.C., pointed out that the company had been carrying on business since the twelfth century, and the oldest documents in their possession dated back 700 years.

The League of Nations.

Loans at 2 per cent., but the League still goes on.

Is that costly (to this country at any rate) plaything, the League of Nations, within sight of being snuffed out as it should have been long ago had the interests of the taxpayers been considered? Instead of cutting down the salaries of useful men at home, judges in particular by 10 per cent., were the salaries of the British (and other) delegates and officials cut by 100 per cent. this country would be better off in every way. Already one feels that the League has become the laughing stock of honest men, and now they are beginning to question the honesty of some of its salaries. Can one say this means that the man-in-the-street will be inclined to call the policy and the cost of the League by harder names than before.

At present, we have been told, the outstanding arrears of contributions from the member States amount to £792,000. What a sum—more than sufficient to cover the cost to the Empire for two and a half years' payments. At present the League is to continue to pay the 700 officials of the Secretariat an annual aggregate of £240,000 at par in salaries and the 400 officials of the International Labour Office £262,000, less small reductions here and there. Where does all this money come from if so much money is owing to the League, whilst South America is ablaze, and Spain unsettled? Can the League of Nations interfere in home warfare, generally known as revolutions? Meanwhile Argentina is said to be in arrears to the tune of £480,000 and other countries pay as little as possible, perhaps nothing at all. How much does Nicaragua or China pay, for instance, to this absorber of cash, where only a single speaker was present on one occasion, and yet, as M. Herriot says, the League has only words at its disposal, no material power to enforce its orders. Truly a costly gasometer. If there is no speaker on useful subjects, it has not even words to offer in return for its mountains of salaries. How much longer will such a waster of money be allowed to continue to fritter away the purchasing capacity of the masses already reduced by the drop on investments to $3\frac{1}{2}$ per cent. and even to 2 per cent., whilst the price of meat, bread and milk is as dear as ever? Nineteen States owe money, including China £380,000. Are such countries, one wonders, allowed to sway the fortunes, health and happiness of the world and this country in particular without paying their full share? In the present budget, we understand only 63 per cent. of the contributions have been paid. How can such a thing be allowed to continue? It is distinctly dishonest to those who do pay when we are told that the total saving of £2,810 will be swallowed up by the creation of the new post of second Deputy Secretary-General.

Have you ever seen "usine sugar" on sale in the open markets of the West Indies with the wasps, bees and flies seeking for a spot to draw a share of the sweet from. One wonders . . . several things, including one as to whether the salaries of the League resemble those piles of sugar.

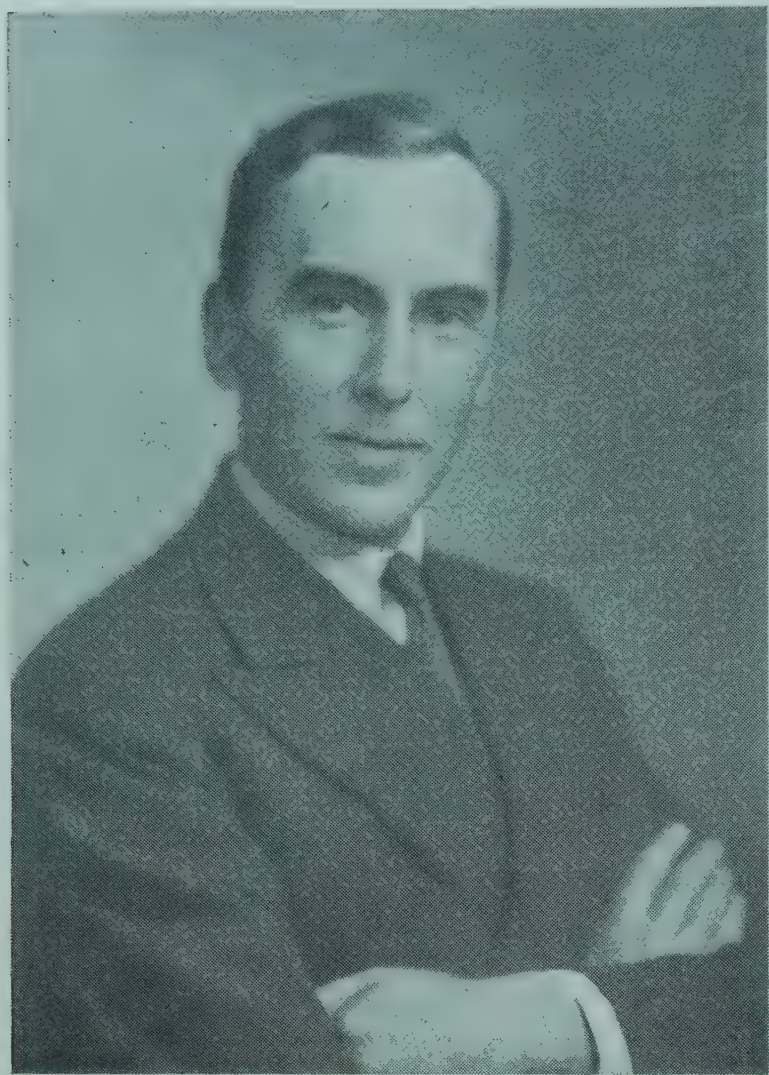
(Continued from p. 210.)

of a thorough training both in cocoa products and confectionery in America, as well as over here, before, can we say, he married into cocoa and left confectionery for others. We found his knowledge of the American trade and makers very extensive, especially as probably we scratched but the surface of his full experience, and then—we switched back to the meeting of the London Cocoa Association. "The position both of raw and manufactured cocoa to-day," Mr. Methven pointed out, "is, and must be for some time, largely dependent upon the demand and consumption in America, Germany and Holland, and so has quite an international character with a good deal of politics about it. Prices for the raw materials, sugar and cocoa continue low, but contrary to the common belief of many, such low levels are not satisfactory to the manufacturers any more than they are beneficial to producers."

We, of course, agreed with this, remembering what the founder of the firms of Epps, i.e., James I, told us one day when speaking very decisively on the mischief of spells of very low prices which, he claimed, not only caused actual consumers but even the retailers to clamour for impossible reductions, and also brought into the trade for the time being those who should have been contented with their real trade of "grinding up coffee, mustard or pepper or whatever they did." One has to remember also, at least in these days that the cause of low prices, i.e., over-supplies through under-consumption because incomes are restricted, is the great evil, and the fact that the Government can raise £150,000,000 at 2 per cent. by merely whistling (and paying commissions), shows how the spending capacity of the country has left the masses and got into the hands of the few.

Lastly we touched upon the question of propaganda, which we claim is not, by any means, dead but sleeping, and even then one likes to think that it is doing so with one eye open. "I regret exceedingly," said 'Our Friend,' "that the original scheme for Cocoa Propaganda did not materialize. I am hopeful that the London Cocoa Association will not lose sight of this important matter, for nothing would help the planters through the sale of their beans like a well-considered and successful propaganda campaign. I trust, therefore, that the scheme may be revived and launched in the end."

And so say all of us.



"Tropical Life" Friend.
No. 329.

MR. H. F. METHVEN,

Retiring Chairman of The Cocoa Association of London, Limited, Managing Director of W. S. Shuttleworth & Co., Ltd.

WE take it as good omen that two of our three oldest firms started trading in tea and coffee and then, moving into cocoa, dropped the others entirely so that one can truly say "*Cacao uber alles.*" As we pointed out in June last year (p. 111), John Cadbury No. 2, in March, 1824, began business in Birmingham as a tea and coffee dealer, taking in, as an unknown cuckoo's egg, the retailing of cocoa nibs and powder which grew and grew until, in 1831, the egg had hatched and the bird grown large enough to push the original occupants out of the nest—a happy omen for cocoa.

With the firm of Shuttleworth it was the same story, only the original hatchling grew to be a mighty fine bird before he was replaced, in fact, one almost feels he died of old age at 50, which, mind you, is old for a wild bird. We say this because, in 1830, one William Sewell Shuttleworth, a young man employed in the tea trade, set up in business as a wholesale tea merchant under the name of W. S. Shuttleworth & Co., which name is as strong and vigorous as ever a hundred years after. Those now in charge,

therefore, when issuing a Souvenir in commemoration of their first Centenary, were right to start with that saying of Pope's "Who lasts a century has no flaw."

To return to our story, tea occupied the entire nest until 1881, when the egg coffee was laid and duly hatched out into a fine bird, then came the cuckoo in the shape of Mr. Frederick Foreshew, for it was he who deposited the egg, which at first did not commend itself to the other partners; but which all the same remained and hatched and grew until first tea and then coffee were pushed out of the nest almost unnoticed and cocoa reigned supreme. "What a pleasant story you tell," the planters will say, "are there any more Frederick Foreshews to repeat such an achievement in this country or elsewhere?" Where these notes are being written cuckoos abound galore, until one would like to shoot every one of them, but with the cocoa cuckoo one feels, with the planters, each one should be welcomed so that their number could be increased.

And now we come to "Our Friend," who has charge of this fine foster child of the old tea trade. After the annual general meeting of the London Cocoa Association on October 4th, we sought out Mr. Methven, who was chairman on that occasion, to satisfy at least a portion of our great thirst for knowledge on the subject of cocoa. We discussed the passing of the fine, old growths, and the improvement in the quality of the new ones. As our opinions did not agree on some of the points raised, we changed the conversation and entered into a most interesting discussion regarding the best friend of the planter, i.e., the biggest consumer of the actual beans in the trade. We suggested cocoa powder but then learned what a wonderful supporter of the planters' side of the industry cake or moulded cocoa was, especially the line that runs out as 2d. bars. The daily production and so, one feels, the consumption of this line probably tops 2,000,000 cakes a day and if with milk chocolate bars, as some claim (not "Our Friend"), there is at most 11 per cent. of nib, there is also 30 per cent. of added butter which requires about three times its weight in beans to produce. Plain chocolate bars have twice as much nib but less butter, and so the two run about even from the planters' point of view. When one realizes the demand for this product, you feel that the powder trade for consumption as a beverage must be a mighty good one, if it beats these sales of bar, cake or moulded chocolate (the same article with different names).

Then we discussed the consumption of beans per firm in America against here. Has Hershey, for instance, ever touched 50,000 tons since the war in a year, and how much does Rockwood take in the twelve months? From this we learned that "Our Friend" had enjoyed the advantage

(Concluded on p. 209.)

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Tropical Life.

NOVEMBER, 1932.

Modern Motors.

WERE a man or woman to retire with the latest set of volumes of the encyclopædia for a long week-end in the fond hope of being able to master its contents during the four or five days of their vacation, the chances are that either friends or relatives would have to place such omnivorous readers under restraint for a time, or else the students themselves would be so worn out as to be incapable of further action, harmful or otherwise.

Yet we ask you, could one be more hopeful of sufficiently studying this year's Motor Show at Olympia (without being prostrated physically and mentally) and being able to write a useful report on all that was there, when quite possibly you could, being honestly interested in the motor industry and keen to see it go ahead from year to year, spend the best part of an afternoon over a single car? First of all the "shock" you receive when, light-heartedly, you enter Olympia thinking that you will see all that is needed in a couple of hours, and find you need a couple of months, renders it difficult to settle down to work. All the same you do so and, in our case, when we did emerge, we came away regretting that the Show has to be held at a time when the bulk of our overseas readers had returned home, however popular (far too popular to please us) October was with the Trade generally and the purchasing public in particular. Our only advice under the circumstances can be for everyone likely to visit London next year to arrange for their stay to last until after the Motor Show at Olympia, for the visit to such an exhibition truly is an "eye-opener" and mind-opener in every way, and therefore is part of every man and woman's education in these days.

It is no good to say you have seen the Show, "Yes, it was in '25 and again in '29," that goes for nothing. If you had, fairly and squarely, seen this year's Show and could compare it with last year's exhibition, you would understand what we mean and—let us say right here—there is an increasing tendency for the motor industry to become a better and better buying customer of the tropics, if only in oils and rubber, but also why not in fancy woods, in which the tropics offer an assortment quite unobtainable elsewhere? Therefore we do suggest for everyone of our readers who can possibly do so, to make a point next year of staying in London until after the Motor Show in 1933 and then, of course, visiting it both as a seller of raw materials as well as a potential buyer of a car or two. Perhaps the following extract from a letter received

from the wife of one of our readers who (the wife) went with considerable reluctance to "that sardine pack" only to please her husband, can best illustrate how agreeably surprised visitors can be at their reception and, given an average share of intelligence, at all they are shown or "fox out" on their own account whilst there.

"The Motor Show was very good but it *was* a squash. Why does everyone want to go at once, or, put it another way, why do the directors of the Show expect you to pack a week's, if not a month's, work in an afternoon or two? There must have been thousands of people there. I was much interested in those stands which showed the skeleton of the cars so that you can see the motor and all its works; good idea, I consider. One make of car has a self-changing gear—one of the features of the Show. When fully explained you thank the representative for the trouble he has taken to prove it is quite self-changing, even if you find that, like a goat, it is mainly 'all but,' although certainly very hot stuff at that. I noticed that several of the cars had new ideas for changing gears, which is done

quite silently, but you want to see it operated to understand how well it works. With rubber at 2d., or is it 3d., per lb. and everything else *pro rata*, I was not ashamed to own that we were not running a car *now* when I sat in this or that car and the men came along and rattled off a dozen new advantages of each (and they are new and distinctly advantageous) before I could get a word in edgeways. All the same, this Show surely beats all the others, so be sure you visit it. In conclusion may I report, in case they are giving the car away for cigarettes, or anything else, that the one I fell in love with most of all was a fawn-coloured Rolls-Royce coupé four-seater. It was a beauty, lovely lines and a gorgeous long bonnet, and cost (according to someone) only £1,650. I really would have bought it, but my eagle eye spotted a little dent in the metal cover of the spare wheel, and as they would not knock off the odd £1,600, as being slightly soiled, I left it. All the same it was a car to be admired inside and out. When you see such work you do not wonder people go Rolls-Royce mad."



TEA.

The Indian Tea Association—Dr. Mann on Russia and East Africa.

ACCORDING to the reports concerning restriction schemes for tea between the Dutch and the Indian and Ceylon growers the idea and the will to do so seem to be going ahead, so that before we close we hope to hear news of an agreement having been arrived at. As the Dutch caused the breakdown of the previous scheme one feels now, since both sides, Dutch and English, have come together again, negotiations will be less liable to a hitch. We hope that this will prove to be the case.

In face of this, it is interesting to note that the tea crop of 1931 from Northern India is estimated to have been 335,189,120 lb., as compared with the official figures of 330,380,929 lb. for the five principal districts in 1930. The total exports by sea from Calcutta, Chittagong and Bombay from April 1st, 1931, to March 31st, 1932, amounted to 297,068,219 lb. (apart from 17,003,724 lb. exported to Indian ports), against 307,396,742 lb. in the previous year and 327,179,177 lb. in 1929/30. In addition, the quantity of tea dispatched from Calcutta to Bombay by rail in 1931/32 was 4,388,282 lb., as compared with 3,672,437 lb. in 1930/31 and 5,470,227 lb. in 1929-30.

The estimated crop from Southern India in 1931 was 55,573,378 lb., as compared with 53,802,044 lb. in 1930 and 58,517,586 lb. in 1929. The shipments from Southern India during 1931

were 49,223,185 lb., as against 47,437,409 lb. in 1930 and 52,284,245 lb. in 1929.

With regard to production, we were told in July by the Chairman of the Indian Tea Association, large quantities of tea continue to be turned out, and unless markets show considerable expansion in the future, the result is inevitable. There is no use shutting our eyes to the fact that many concerns in Sylhet and Cachar will go to the wall in the struggle, and this is more to be regretted as statistics show that concerns in these districts are in no way responsible for the existing over-production. At one time all the ills of the industry were attributed to the producers of common teas, but figures which were published last year exploded this idea. It is not common tea, but the large quantity of poor, characterless, medium tea turned out year by year which is depressing the market.

Tea represents approximately 8 per cent. of the total trade of India, and just over 14 per cent. of the total trade of Bengal. It is far the largest export of any commodity from South India, and out of a total export of 21 crores of rupees, tea represents over 4 crores, or 19 per cent. The industry employs over one million people, and the capital invested amounts to over £40,000,000 sterling. Over £20,000,000 sterling is spent every year in working the gardens, of

which about 85 per cent. is disbursed in India, going either into the coffers of the Government of India or to the Indian population. So far as the Province of Assam is concerned, it is dependent for its very existence on the tea industry, and without it there would be little trade left in the Province.

With regard to Russia, this country, we were told, at present is the one market which offers an opportunity for a large increase in the consumption of tea quickly, and without any elaborate or costly advertising or selling campaign. Considering this and our previous connections, it is a market which should be encouraged, and "I appeal to all those in South India and Ceylon, as well as in North India, who have not yet joined the scheme to do so now and help the industry as a whole. As there is always considerable doubt as to the likelihood of Russia meeting her liabilities, may I quote the following from a report of the proceedings in the House of Commons on June 20. In reply to a question put to the Secretary to the Overseas Trade Department, Mr. Colville said that the total amount of credits in respect of exports to Russia which the Export Credits Guarantee Department had contracted to guarantee from August 1st, 1929, to May 31st, 1932, was approximately £15,400,000. The maximum liability assumed by the Department under these contracts was £10,000,000, and up to May 31st, 1932, bills for £6,100,000 had run off without any call being made on the Department guarantee."

This is a reminder that last March in the *British-Russian Gazette* and also in *The Spice Mill* for May, Dr. Harold Mann wrote at length on "The Soviet Tea Industry," and every statement made deserves attention on the part of those who have been in the habit of selling tea to Russia, as well as other centres which have had to compete extra keenly against the surplus supplies that would have gone to the land of the Slavs had times been normal, but, since Russia has been all higgledy-piggledy, they have been looking elsewhere for their market. Can one ask for instance whether, on the basis of her 1913 consumption, Russia to-day would and could consume the surplus outputs of tea if her people were given the chance of living their own lives and spending the money they make on themselves? The following concluding paragraphs from Dr. Mann's report are worthy of close attention, and not only by tea planters and shippers.

"I have been frequently asked since I came back from Georgia what is the probable future importance of the industry there in the world production of tea. I am afraid it is almost impossible to give an answer to this question. The rise in production in Georgia will be slower than has been expected by some of the more sanguine of those who have made forecasts on

this question. The plans provide for a production in 1934 of 4,850,000 kilograms, equal to slightly over 10,500,000 pounds of tea per annum. This will not, however, be reached in such a near future, and in any case the ultimate production will be far less than the consumption of the countries within the Soviet Union.

"With regard to consumption, the pre-war amount of tea utilized within the present territory of the Soviet Union is stated to have been about 60,000,000 kilograms, equal to about 130,000,000 pounds of tea. Although the present consumption (1928-1929) has only been estimated at 28,750,000 kilograms, equal to about 63,000,000 pounds of tea, yet that consumption is bound to increase with the return of prosperity to the Russian people. These figures show, I think, that there is always likely to be a very large demand for tea from other countries even when the Georgian tea area has been fully developed, and unless new areas suited for tea can be found within the Russian borders, the country will not in the near future be entirely self-dependent for its supply of tea."

And now Dr. Mann has returned from his visit to East Africa, Nyasaland and Tanganyika in particular, where he has been studying their tea industry. *East Africa* for October 27th tells you all about Dr. Mann's views on the subject.

Producers, among other things, of cotton and cacao, the raw materials of lace and cotton wear, as of cocoa products, will hear with regret of the plight, one sincerely hopes of the temporary plight, of Switzerland owing to her industry, besides suffering, as are other countries, from the general depression, being so hemmed in by tariff barriers on all sides. Thus, subject to high taxation within which is crippling her economic activity, the same as with ourselves, this is seriously diminishing the purchasing powers of the community. The drop in the Swiss export figures is incredibly large, whilst the decline in revenues from the tourist traffic coupled with the high cost of living (for the Swiss) is making it hard for them to hang on until the tide turns and prosperity comes once more.

Here we have surely a striking example of a very industrious and (at any rate formerly) a prosperous people living in these days of "big things" within too confined an area to enable them to compete successfully against those countries with room to spare in which to run "rotation industries." May we yet see, for economic reasons, under the changed conditions of the world to-day, Europe in particular, that Switzerland will find it to her interest to merge into or amalgamate with a country not so confined in areas, if only to remove at least one of the tariff barriers that are keeping her back.

MARKET REPORTS, GOSSIP AND PRICES.

Reduced Purchasing Powers—What they must lead to.

QUITE a keen demand, one hears on all sides, is springing up for British banking shares. Is this surprising considering that Government Loans have been done as low as 2 per cent. whilst our banks are as safe and well managed as any banks on this earth, and more so? A glance at "gilt edged" in the monthly list of Messrs. Chandler & Co., of 4, Copthall Court, shows many rises in the shares.

With the present mania of converting securities bearing a fair rate of interest into investments carrying interest as low as 2 per cent., a rate which surely only banks can tolerate, those who are producing the wherewithal to feed, clothe and supply raw materials for much needed household and other wants, for this (and more than one other) market, can well stop to think what it must mean in the end to us all, for it can but seriously curtail the purchasing power of the most stable class of buyers in the world, i.e., those who live within their income and so buy regularly and pay their bills. Let us jot down the facts and remember them:—

1. On one scheme alone, we are assured that the Government has arranged to pay some £23,000,000 less interest on money advanced for the good of the country.

2. Following this we are told that a further £150,000,000 have been placed on a 2 per cent. basis. What sort of a purchasing power can be looked for from a community run on such a basis? We have heard congregations being described from the pulpit by a disgusted vicar as a 2½d. lot, that being the average yield per head of those present in the collection bags, but even then that same vicar has his stipend, which is not always the case with the small investor who looks to the Government or other "gilt edges" entirely for a safe and fair return on money lent.

3. The air is full of other schemes of conversions. What else could be expected? If these come off, can we, for instance, look for £100,000,000 a year being knocked off the purchasing power, not of everyone but of the best of the bunch as regards buyers in every case, i.e., those who have systematically saved money and allowed it to be used for the general good, whilst the others who spent and always will spend every cent they can beg and borrow, are not affected. The general trade of the world of course would be even in a sorrier plight than it is to-day, were it dependent for money on these spend-alls, not only to pay for their crops but also and especially to finance and help them to carry on that which forms the world's commerce everywhere.

4. Lastly, but not least. The collectors of Income Tax. Poor Souls, what of them? Do the Government and other have-been or about-

to-be converters want us to believe that the Income Tax will go short. Not a bit of it. The very idea would be repugnant—to the Department. With a curtailment of anything from £23,000,000 up to £100,000,000 a year (dependent on the spread of the disease) our rate of income on what is left must be raised or some subtle rearrangement made to fill the vacuum. Nature may abhor vacuums; she cannot possibly do so to the extent that Governments do when the empty spaces refer to the Budgets and the salaries and payments due to all those who run the country, this one or any other. For, when you come to think, after paying America her pound of flesh on a security that knows not conversion, all the money spent is paid out in salaries and wages under one head or another, from the charlady at the House of Commons to the—well, never mind who it is that gets the biggest pull. Being free from graft over here we feel at least that the full amount reaches where it should do and so of course is spread over huge areas.

All this may appear to be something of a nightmare, or exaggerated or whatever our readers like to call it. Leaving them to find the correct term we do urge our planting friends and those who look to the public for support as shareholders in companies turning out machinery, &c., needed by the producers of the world's foodstuffs and raw materials, to sit up and watch the world during the next year or two and see what is likely to happen (do not wait for the serious changes to take you unawares if you can help it) just when we were all hoping that at last a chance was in sight of emerging from our, apparently bottomless, pit of depression. Take the two solid facts. Those £23,000,000 extracted from investors' dividends and the idea of obtaining 2 per cent. only on money lent to the Government when industry the world over is crying for capital at three times that ratio of return and more, with which to develop their lands, factories, &c., and through that, the trade of the world. Of course the answer will come pat: Who wants to develop trade now when everything is over-produced and so many are hard up if not actually out of employment and draining money from those who have it? There is sense in such a reply, but surely no sense or righteousness to the capitalist or to those who are employed and those who are not, in further depleting the purchasing ability and the saving power of those who seem likely to have their returns so seriously cut to help others who do not save.

And now let us consider those who will receive wounds from such treatment. Coming to our usual market chatter, we will start with:—

Rubber.

According to the two paragraphs under the heading "Rubber" included in the Administration Report of the Director of Agriculture for British Guiana for 1931, the area in that colony under Para rubber was 786 acres, or much lower than the area returned for 1930. The low price of rubber at distributing centres coupled with trouble from an endemic leaf disease has reduced the industry to so low a level as to be hardly worth mention in the returns (so says the report). The returns do not show what quantity of rubber was obtained.

The exports of balata (*Mimusops globosa*) are given. They amounted to 6,433 cwt. valued at \$203,376 (American currency, one takes it), as compared with 8,888 cwt., worth \$390,292, in 1930. Then follows an interesting if sorrowful item of information which tells us that owing to the gradual replacement of cable services by wireless telegraphy the trade in balata has been very adversely affected as the gum, of course, was very largely used for the insulation of submarine cables.

Coming to London, Messrs. Lloyd, Matheson & Carritt tell us that mid-October left the rubber market quiet with an easier tendency on account of the little interest shown by buyers. During the following week prices on paper recovered somewhat owing, to a certain extent, to the lower exchange value of the £ sterling. Reports from America show their deliveries for consumption to stand at 22,491 tons for September, as compared with 22,372 tons in August and 23,638 tons in September last year. Their stock and afloats came to 411,977 tons on September 30th, against 400,188 tons on August 31st and 316,744 tons at the end of September last year. Meanwhile, Messrs. L. M. & C. quote the following prices, and give stocks on this side as follows on the dates mentioned:—

	1932		1932		1932		1931	
	OCT. 19TH		OCT. 12TH		OCT. 5TH		OCT. 21ST	
SPOT QUOTATIONS—	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$	0	2 $\frac{1}{2}$	0	3
Crepe (F.A.Q.)	0	2 $\frac{3}{4}$	0	2 $\frac{1}{16}$	0	2 $\frac{1}{16}$	0	3 $\frac{3}{16}$

	OCT. 19TH		OCT. 12TH	
	SMOKED SHEET		SMOKED SHEET	
	s.	d.	s.	d.
FORWARD POSITIONS—				
1932, October	0	2 $\frac{3}{4}$	0	2 $\frac{3}{4}$
„ November	0	2 $\frac{3}{2}$	0	2 $\frac{3}{4}$
„ December	0	2 $\frac{7}{8}$	0	2 $\frac{3}{4}$
1933, January/March	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$
„ April/June	0	2 $\frac{9}{16}$	0	2 $\frac{7}{8}$
„ July/September	0	2 $\frac{3}{2}$	0	2 $\frac{3}{2}$

We certainly can no longer twit drapers with their 19s. 11 $\frac{1}{2}$ d. or 9 $\frac{3}{4}$ d. rates in face of the above fractions.

STOCKS—	1932		1931	
	TONS		TONS	
London, Week ending Oct. 15th	43,729		78,704	
Liverpool „ „	57,831		55,276	
Total	101,560		133,980	

SINGAPORE QUOTATIONS—

Oct. 19th.—Spot, 7 $\frac{3}{8}$ cents; January/March, 1932, 7 $\frac{1}{16}$ cents; April/June, 1933, 7 $\frac{1}{8}$ cents.

Oct. 12th.—Spot, 7 $\frac{1}{2}$ cents; January/March, 1932, 7 $\frac{3}{8}$ cents; April/June, 1933, 7 $\frac{7}{8}$ cents.

Balata.

This article is quiet and quotations rule around 1s. 5d. lb. for Dutch, subject to duty, against 1s. 8d. c.i.f. for British, free of duty, against 1s. 8d. to 1s. 9d. on the spot. Other rates include 10d. spot or 9d. c.i.f. (both nominal) for Venezuela, 3d. to 4d. (nom.) for Iquitos, and about 1s. for Panama.

Coffee.

Quoting Barclays (D.C.O.) Bank report we are more than surprised at the following paragraph under the heading of Nyasaland, where, we are told, that "proposed legislation prohibiting motor transport from competing with railways is causing concern." Can even a Government force such a prohibition on a people? What has the motor trade over here to say to the principle as a rule, even if Nyasaland must be left as the exception to prove the correctness of the rule?

Moving on to coffee, we learn from the same source that in the Nairobi area of Kenya more rain would do the crop good, but otherwise the outlook is favourable, the quality is good and prices have improved. Tanganyika also reports satisfactory quantities and quality.

The first convention of the Associated Coffee Industries of America took place at the Brown Palace Hotel, Denver, on September 12th, and a report of the proceedings will be found in *The Spice Mill* and a short one in *The Tea and Coffee Trade Journal*, the latter saying that their October number will include a detailed report. This should be worth looking for if only to get some idea what Brazil is doing and likely to do. According to *The Spice Mill* interesting addresses were given by Miguel Lopez Pumarejo, special representative of the National Federation of Coffee Growers of Colombia, representing over 35,000 growers; and by Consul General Sebastiao Sampaio who represented not only the Government of Brazil but the National Coffee Council of that country. He reviewed the propaganda work already done by Brazil and regarding the Farm Board coffee release said that a satisfactory settlement would be made in a spirit of co-operation that would be satisfactory to both sides. He referred to a 'phone conversation from Chicago with Dr. Pinto, head of the Council, who promised an increase in the exports of fine coffees, especially from Sul de Minas, and said extra cars from other railroads had been rented to facilitate this movement of coffee.

Coming to the more usual run of market chatter, reports from Nairobi speak of about twenty tons of K.N.C.U. coffee, cleaned and graded in Nairobi, being put up for auction there,

but the prices obtained were so low that the experiment may not be repeated. Over here supplies have been light, but coffees suitable for the Home Trade brought steady rates, including:—

Kenya, bold fair greyish and greenish, 84s. to 87s.; small, 61s. 6d. to 77s. 6d.; seconds, 75s. 6d. to 76s. and 82s. 6d.; peaberry, 81s. 6d. up to 126s.

Tanganyika, good bold greenish, 83s. 6d.; seconds, 65s. 6d.; smalls, 57s.; peaberry, 76s.

Uganda, bold greenish, 81s.

Costa Rica, common medium, 61s.; smalls, 47s. to 62s. 6d.; common to fair seconds, 60s. 6d. to 71s.

Colombian, bold good to fine greenish, 93s. to 112s.; seconds, 66s. to 90s.; smalls 55s. to 59s.

Cotton.

The Empire Cotton Growing Review (P. S. King and Son, Ltd., 5s. post free for the four quarterly issues) of the Empire Cotton Growing Corporation for October includes an article on "Agriculture as an Industry," by Sir Daniel Hall, and "The Acclimatization of Cottons in New Areas," by Dr. S. C. Harland, of the Cotton Research Station, Trinidad, who concludes by suggesting certain varieties when starting new plant populations, including Brazilian *Moco* and *Tangüis* from Peru; and this reminds us: *The Bulletin* of the Pan-American Union for October devoted pp. 718-720 to a portrait sketch of Señor Fermin Tangüis who died on August 24th last. This was the man, of course, who, through his work on the experimental and selective breeding of cotton on his plantation in the Pisco Valley of Peru, produced the wilt resistant variety, since known as Tangüis' cotton, which newcomer has proved a great boon to Peru's cotton industry (also elsewhere, so far as we can remember) and thus helped their economic conditions during a period when such help was doubly welcome. It is said that his discovery must have added millions of dollars to the wealth of Peru, his adopted country, for he was born in Puerto Rico and started in Peru as a miner. Panama disease with bananas is *Fusarium cubense*; the fungus that causes wilt in cotton, at any rate where Tangüis was, is called *F. vasinfectum*, and the cotton plant is considered to be its only living host. This pest is said to be able to live, i.e., we take it, to lie dormant in the soil, as long as five years, without the presence of any growing cotton. How does this staying power compare with the Panama wilt disease?

Returning home, we have to report that the issue of our contemporary, *Cotton*, of October 15th was a red letter, no, we mean a red-covered one, again being a special number and considerably enlarged. Sir William Himbury writes on "Cotton Growing within the Empire" and Mr. Nils Olsen, Chief of the Bureau of Agricultural Economics, U.S.A., on "Grade and Staple of

the American Cotton Supply." Coming to more humdrum matters, their issue of October 22nd, when discussing the cotton market in Manchester, outlined a state of affairs that was very much as one would expect. During the past week, we are told, there have been several disturbing influences in the market, and the conditions have not been favourable for a large turnover, but a substantial inquiry has been encountered by spinners and manufacturers and in small lots a fair amount of business has been done. On the part of merchants there is nervousness with regard to world politics, and it is recognized that no one can know what conditions will exist in two or three months time. This uncertainty checks anticipatory buying.

At the same time America seemed in a similar state, for the report speaks of disturbing factors which have been upsetting their market, including exchange movements, on the top of stock exchange phases and the political election reports, and at times the Presidential election seems to overshadow everything. One feels also that the hold-up of surplus supplies is also checking the chance of a stable rise that is not a firework display brought about for a time by speculators.

Coming to prices, the following were the official "Spot prices" in Liverpool on October 21st and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5.46*	5.43*	4.90*	5.84*	7.88†
Strict Middling American	5.66*	5.63*	5.00*	5.99*	7.94†
Fair Pernam	5.56	5.53	4.85	5.79	7.96
F.G.F. Sakel. Egyptian	7.88	7.97	7.35	9.55	11.30
Fine Broach	5.07	5.03	4.34	4.35	7.1 ¹ / ₈
Fine No. 1 Oomra	4.79	4.75	4.19	3.90	6.1 ⁹ / ₁₆
Fine Bengal	4.46	4.34	3.89	3.65	6

* Universal Standards. † Liverpool, Fully Mid. ‡ Good Mid.

Vegetable Oils (London and Liverpool).

MALAY OIL £18 15s. PER TON, SELLERS.

Palm-oil, reports Liverpool, is a quiet but steady market, prices and quotations include mediums for shipment at £17 5s., with Red Sherbro at £16 5s. to £16 7s. 6d. Business has been done in hard on the spot at £18, against £18 15s. quoted for shipment. Lagos for shipment is put at £17 to £17 5s., with soft on the spot and for Oct./Nov. (sellers) £16 2s. 6d. or £16 5s. for Nov./Dec. and up to £16 12s. 6d. for Jan./Feb. For Oct./Nov. or Nov./Dec. shipment Malay palm-oil is put at £18 15s. per ton.

With oil-cake news seems scarce, and any quotations that come our way seem quite nominal. They include London-made linseed cake at £8, more or less, against about 5s. lower a year ago. Indian cake runs from £7 10s. to £7 15s. London-made cotton cake is worth about £4 15s., or a shade less, against £5 5s. last year. Groundnut cake is quoted at £7 per ton.

With regard to other products we will start as usual with:—

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
Oct.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
26	16 10 0	14 10 0	14 15 0	14 2 6	14 0 0
22	16 10 0	14 10 0	14 7 0	13 17 6	14 0 0
19	16 0 0	14 15 0	14 12 6	14 2 6	14 2 6
15	16 0 0	14 15 0	14 12 0	14 2 6	14 2 6
12	16 10 0	14 17 6	14 15 0	14 2 6	14 5 0

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation on Oct. 22nd, stood at £14 2s. 6d. for f.m.s.

COCONUT OIL PER TON.

Ceylon mill oil on Oct. 22nd was quoted at £28 for spot parcels against £23 5s. (cylinders) for Oct./Nov. English deodorized in barrels is worth £32 per ton against £34 10s. the month before.

OTHER OILS PER TON.

	COTTONSEED	SOYA BEAN	PALM
	CROUDE	SPOT, NAKED	KERNEL OIL†
Oct.	£ s. d.	£ s. d.	£ s. d.
26	37 0	30 0	22 10
22	37 0	31 0	22 10
19	37 0	31 0	22 10
15	37 0	31 0	22 10
12	37 0	32 10	22 10

* Crushed, naked. † Net, naked, ex-mill. ‡ At Hull, naked.

SEEDS PER TON.

	COTTONSEED	SOYA BEANS
	EGYPT	GROUND- MANCH.
	BLACK	NUTS AFLOAT
Oct.	£ s. d.	£ s. d.
26	10 15 0	8 15 0
22	10 15 0	8 15 0
19	10 16 3	8 12 6
15	10 16 3	8 15 0
12	10 17 6	8 12 6

Desiccated Coconut.

The market for this article is reported to be easier. Quotations include fine on the spot at 24s. 9d., and medium 24s., whilst for Oct./Nov. shipment halves are quoted at 22s. 9d. c.i.f.

Other Products.

Elsewhere in this issue it will be seen that much space has been given up to tea in various countries producing and consuming. Here, therefore, we will only say that at the last auctions Indian teas met with an active demand for all grades. Southern Indian parcels advanced and common to medium descriptions generally were fully ¼d. higher. Ceylon met with a similar reception with common teas ½d. dearer, and medium and good broken showed an irregular advance of 1d. to 2d. With Java teas the export demand was rather quieter.

Moving on to fibres values for jute have been easing down, but latterly on better news from Calcutta prices moved upwards for a time and then came another drop, closing finally at £16 for afloats with sellers over at £16 5s., whereas early in October Wigglesworth & Co., Ltd., speak of £20 5s. having been paid, this being the highest price so far recorded for the 1932/33 crop. Manila fibre is considered to be unchanged, with

K at £16 5s., against £16 10s. and £16 5s. (in August). J2 stands at £18 15s., against £19, and M1 at £14 10s., against £14 15s., all c.i.f. The continued depression in the shipping trade (20 per cent. of which is said to be lying idle) with a tendency perhaps for sisal to enter into competition for marine cordage, tends to lessen the chances of any immediate improvement. With sisal, W. & Co., Ltd., reported, early in October, that under the stimulus of improved trading conditions in many countries for the time being, African sisal deals figured largely with a substantial turnover in all positions at advancing rates until, at one point, £17 was reached for current shipment and even £17 10s. c.i.f. was recorded. Then came a check, and at the time of writing only £14 5s. to £14 7s. 6d. c.i.f. is quoted. If it is correct that leading shippers have contracted ahead and have done so at the higher range of values, well and good. Java sisal seems to have done well, sharp advances in values being spoken of, but that was a little time back. No price seems available for Mexican henequen but reports speak of accumulated stocks being much smaller.

Shellac on the spot is quiet with TN at 62s. 6d.; fine orange 70s. to 125s.; AC garnet 72s. 6d. and RLI button lac at 75s., against 64s., 70s. to 125s., 75s. and 77s. 6d. per cwt. respectively a month ago. Palm kernels are quiet at £10 15s. per ton c.i.f. to Hamburg, against £11 1s. 3d. last month. Coming to tin and copper, much has been written about both these metals since our last appearance. With tin it is claimed that the market is beginning to feel the effects of the influential support that it has been receiving and the position at the moment is stated to be fairly well balanced. In spite of this the price is slightly below last month's quotation for spot cash, closing at £152 after touching £154 5s., against £152 10s. in September, whilst copper leaves off at £31 15s., against £35. With this metal it is hoped that when the Presidential election is over in the U.S.A., demand will improve and prices advance.

Coming to finance, there has been no change in any of the bank rates, so that we still have Milan at 5 per cent., the Swiss Banks 2 per cent., and Brussels 3½ per cent. Bar silver is quoted at 18d. whilst, owing to the further sharp fall in the value of the £ stg. to 13s. 7½d. or 13s. 8d., the price of fine gold rose to 122s. 11½d. per oz., against 119s. 1d. last month, bringing the retail value of sovereigns up to 28s. 6d. This makes our table work out as under:—

OCTOBER 24TH	1932	1931	1930
Bank rate	2 per cent.	6 per cent.	3 per cent.
Consols 2½ per cent.	76	52½	55½
Bar silver per oz.	18	11½	16½
Exch. on New York	\$3·32½	\$3·92½	\$4·85½

During Monday, October 24th, the exchange on New York was quoted at \$3·32½ to \$3·33½, and gold had since left 125s. behind.

THE WORLD'S COCOA MARKET.

Reorganize our Retailers.

BY THE CONTROLLING EDITOR.

The Confectionery Journal reports the death of Karl, the son of Franz Stollwerck, the founder of the well-known firm of chocolate makers bearing that name, at the age of 73.

Another item of news from the same source refers to the combined proposal of Messrs. Cadbury & Fry (need we add that they are buyers of raw cacao and sellers of cocoa products) to set up a new factory in Dublin on the models of the Somerdale (Fry's) and Bournville (Cadbury's) factories. Their goods must already be well known throughout that ever green and ever (not) peaceful island, since Messrs. Fry have been sending their wares there for sale for over 200 years, and Messrs. Cadbury since they started a century (and a bit over) ago.

Leading artists, including Mr. Philip Connard, R.A., Mr. Arthur Rackham, and Mr. Edmund Dulac, the French artist, have been commissioned by Messrs. Cadbury Bros. to design new chocolate boxes as part of the firm's scheme to encourage the use of the best designs in industry. Quite recently Messrs. Cadbury Bros. announced a competition for chocolate box designs in order to encourage younger and unknown artists to apply their skill to industrial needs.

* * *

PROPAGANDA—Propaganda—Propaganda. Well what about it? What does it mean, what is the derivation of this oft-repeated word, and what is the good of the meaning if it has something to do with the Latin *pango* (I fasten, i.e. batten on to) in the case of cocoa, and having done so, everything sticks. Let us rather go in for *pello* (propel), or *pulsum* (driven), and talk of propulsion, to drive forward. Such a word adopted, we may make progress, at present we seem stuck tighter than ever in the morass of mere words.

The Question of Finance.

In this game of trade expansion everyone tells you how to make the other man pay. We all thought the Gold Coast Colony would head the list, but the Fates ordained otherwise. Thus we ask, going to the other end of the stick, what about the retailers, has anyone suggested extracting the money from them? The idea is perfectly justified because, if the scheme to make cocoa better known is, in any way, to be a success, the retailer must benefit as much as anyone, as the final increased selling has to be done by him. If every retailer, everywhere, were called upon or made (without their knowledge) to subscribe the equivalent of \$5 (American gold), as we do not want to talk of the £ stg. at the moment, how

many dollars would we scoop in, and horrified as every retailer would be if asked to subscribe such an amount to increase their trade, surely that small amount could be extracted *once* without harm and with the prospect of doing much good. In collaboration with the wholesale firms, such a small amount, everywhere where cocoa is on sale, should be obtainable. The benefits on the other hand to those same retailers, if the propaganda or rather the propulsion scheme is properly run, should not only be substantial but also (it should be) permanent and ever on the slight (2½ per cent. per annum) increase.

Some such scheme seems to us more feasible and reasonable than to mulct the planters or shippers at producing centres 20s. per ton or 2s. per cwt. on each ton of raw cocoa exported, as was recently suggested at the Brussels meeting of Cocoa and Chocolate Manufacturers in September. Here, as already stated, is a case of one body wishing to lay the burden of expense on others and, surely, on those who stand the least chance to benefit as do the retailers at the other end of the story. The Hamburg *Gordian* comments very fully on the matter in the opening columns (in German and English) of their issue No. 899 of October 10th, but we cannot agree with them that the current low prices stimulate demand. The older we grow the more certain we feel that the cost of raw materials of all kinds gives the best returns to producer and manufacturer alike if it runs on a fair keel, showing an *equal profit to both*. No one can pretend that this is the case to-day, nor has it been for years past, say back to 1923 if no farther. After the manufacturers the retailers score, but, of course, as with other concerns, the British Railway system for instance, amalgamations should be arranged, for if cocoa products on paper are able to pay the retailer a fair profit on the turnover, this cannot be looked for if half a dozen or more rents have to be paid as well, when one or two rentals would suffice to secure the necessary amount of sales. If ever producers of cocoa and sugar are to benefit through the candy or confectionery trade, some form of reorganization must be looked for, otherwise profits that should go to the retailers, through them to the manufacturers and on to the actual producers are being, and will be, lost in needless rentals and overhead charges. The bigger the allowance or discount given to the retailer the greater will be the need of reorganization, as more men and women than ever will just exist (or go bankrupt) on sales that are too small in proportion to the expenses.

Internationalization.

It is just two years ago since the International Congress of Chocolate and Cocoa Manufacturers met together at Antwerp (see TROPICAL LIFE for October, 1930) and gave to themselves a permanent being. What good has this body, or any other body, done to the cocoa-producing industry generally during those two years? So far as the planters are concerned, and with apologies for saying so, surely no good at all. Why such stagnation? The answer surely lies in the difference between Propaganda and Propulsion. How can you propel when your battering rams or travellers' motors are up against granite rocks in the shape of the retail grocers at every turn, to whom alone we can look for the sale of powder, with or without, but mainly without, any enthusiasm or push in those sales, and the confectioners, who are but little better. If the sale of "smokes" is easier, more regular and remunerative, why then of course the retailers will centralize on "smokes" whilst they go on serving out penny's and halfpenny's worth of sweets with a 2d. moulded chocolate bar as a record sale brought about by advertisements and push on the part of the makers and not due in any way (as a rule) to the local retailer's enterprise. Possibly the optimism of the writer on the subject, were he to start a retail shop for chocolate products, might render him liable to be mobbed or placed under arrest for his own safety owing to the stupidity of the masses not seeing eye to eye with him and his placards posted up to prove that "There is nothing at the price like Good Cocoa and Sweets," but even that would be better—for the planters—than the lethargy and indifference at the other end of the story, where their cocoa and sugar are being doled out by the small shops almost reluctantly, certainly automatically. All this of course must be pushed aside and is being pushed aside so far as London's mass-sale trade is concerned by the cut-price shop. London alas! is but one centre. We want these shops everywhere because, until we get them, you can talk your heads off, but you will never place the sale of cocoa and sugar products on the scale which is necessary to revive the shrinking fortunes of the cocoa and sugar planters. Above all something must be done to rearrange the retail distribution of cocoa powder for drinking; this article, the greatest asset of all to the planter, is at the bottom of the ditch, or if it gets nearer to the top it is a compounded mixture and not cocoa only.

* * *

The Board of Trade Returns.

Now we come to the facts of the case. After an excellent run for some months the consumption of cocoa, i.e. the deliveries of raw cocoa for consumption in the U.K. during September, has had

a nasty fall, although, one is glad to see, we are still above both last year and (well above) 1930 so far as the nine months' totals are concerned. Taking September alone, in 1930 we took into consumption 4,493 tons against 9,042 tons last year and 4,665 tons last month, showing a drop in the deliveries of 4,377 tons. It is to be hoped that with the remaining three months of the year we shall be able to build up our figures again and reach nearer to those 5,847 tons increase at the end of August. In any case, here are the returns:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY-SEPTEMBER—RAW COCOA ONLY.

NINE MONTHS JAN.-SEPT.	LANDED TONS	INCL. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK SEPT. 30 TONS
1930	50,405	47,372	41,229	2,464	37,050
1931	54,991	51,316	47,398	3,243	32,300
1932	53,297	49,950	48,867	2,225	30,800

Dec. 1,694 Dec. 1,366 Inc. 1,469 Dec. 1,018 Dec. 1,500

Are the above figures as good as they should be in face of all we have been told of foreign firms flocking to this country in person or by proxy to make their products in order to avoid the duties recently imposed? If all these newcomers are in our midst, there is no sign of them in the advertisement columns of the daily press (with one possible exception), or in the trade papers. When will they start making themselves and their wares known? When their factories are running and final arrangements completed, do you say? If that answer is correct, then how much of our current consumption is all-British or old-British, if you prefer? Has it to be further increased when the new firms get going? If so, then all the better for us and those planters who satisfy our needs.

Meanwhile Bahia, in spite of her 1,500,000 bags (not tons) crop for 1931-32 is beating that record to date, although a smaller crop was expected this season. For the first $4\frac{1}{2}$ months of their present crop year (May/April) 484,500 bags were shipped against 436,000 during the full five months of the last record output. Will this continue? We are told no! Because there will be a big falling off at the end of the crop. Unfortunately much can happen between now and next April and the Gold Coast and Bahia can have a battle royal as to who shall dominate the American market, a market that is easily inclined to be overdone, and like Jonah's whale—well . . . we all know what he did—and America may swallow more than she can digest also. Her mouthful of Bahias during September was decidedly on the big side, and if she gets upset this market will be so as well. Let us therefore scan Messrs. Marcone's returns to the end of September to see how the cat has jumped so far:—

ARRIVALS AT NEW YORK, BOSTON AND PHILADELPHIA.

	SEPTEMBER ONLY		JAN./SEPT.	
	1932 BAGS	1931 BAGS	1932 BAGS	1931 BAGS
Accra	19,638	56,541	757,967	780,427
Lagos	40,954	9,041	193,526	223,382
Ivory Coast	—	—	48,744	114,566
Makes	60,592	65,582	1,000,237	1,118,375
Bahia	184,600	82,700	733,521	457,184
Venezuela	12,701	4,298	91,703	107,089
Sanchez	939	26,993	200,132	329,956
Trinidad	9,830	3,097	73,138	149,584
Makes	268,662	182,670	2,098,731	2,162,188
All others	14,997	14,591	192,229	228,619
Totals	283,659	197,261	2,290,960	2,390,807

Prices and Quotations.

Spot sales continue, but very little news concerning the transactions is allowed to escape. Quotations however show no change, as Trinidads are quoted at 42s. to 52s. and the last sales mentioned included parcels placed at both extremes. Good Grenadas last sold at 33s. to 34s. and fine have been sold up to 38s. On the spot, mid-crop Accra realized 27s., and fine 29s. 6d. up to 30s. 6d. against lower quotations—after a slight spurt—on c.i.f. terms; good Samoa realized 65s.; Costa Rica 30s. to 31s. for fair red. Of fine growths, fine bold Venezuela touched 87s. 6d. and Maracaibo 108s. Useful grades of Ceylons are purchasable up to 60s. with the finer kinds

selling at 58s. to 62s., whilst 62s. 6d. to 72s. has been paid for Arriba, against 55s. to 57s. 6d. on c.i.f. terms. Bahias on the spot are quoted 37s. against 29s. 6d. on c.i.f. terms.

Other Matters.

And now we have only room for the year's output of the cocoa crop on the Gold Coast having given the deliveries into America for September. These run as follows:—

COCOA EXPORTS FROM THE GOLD COAST.

	1931-32 TONS	1930-31 TONS	1929-30 TONS
October	5,598	11,251	15,634
November	18,856	15,031	34,537
December	35,893	13,661	29,563
3 Months	60,347	39,943	79,734
January	42,360	25,942	34,659
February	40,455	41,720	19,078
March	19,547	41,659	21,201
6 months	162,709	149,264	154,672
April	11,337	32,774	9,522
May	4,341	9,874	14,038
June	6,324	10,081	12,923
July	7,648	6,319	17,855
August	6,165	3,220	11,391
September	8,124	5,599	6,163
12 months	206,648	217,131	226,564

Between July and mid-October the Gold Coast this season got the pull over 1931, for about 30,000 tons were shipped against 20,000 only for July/October complete a year ago.

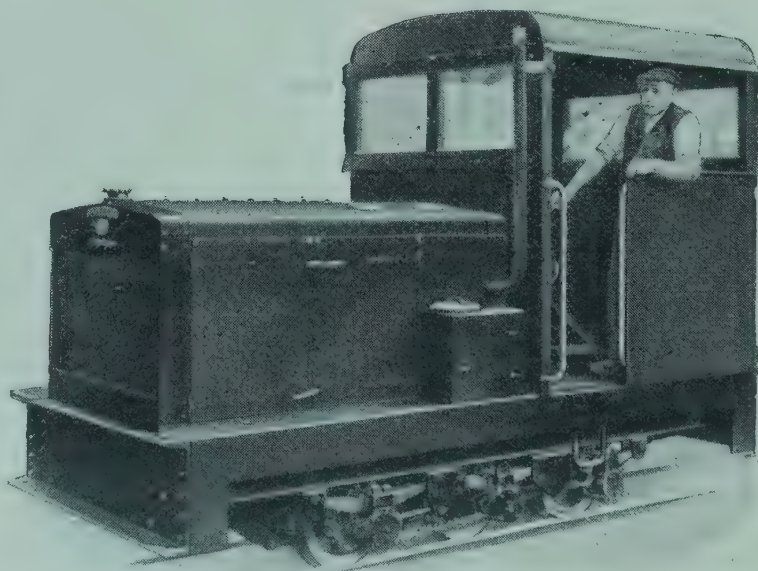
PETROL LOCOMOTIVES

SIMPLEX

DIESEL LOCOMOTIVES

STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ "
20/35	4 "
40/50	6 "
40/50	8 "
40/50	10 "



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3½ "
20/36	2½ "
20/36	4 "
32/42	5 "
65/85	10 "

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DECEMBER, 1932.

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IN TOUCH WITH EVENTS

This being the equivalent of our Christmas number (hence our Christmas flights to Egypt and East Africa) we will take this opportunity to thank everyone for their assistance who has worked for and helped TROPICAL LIFE to be the success it has been during 1932; we trust that we shall be doing the same to the same crowd and many more besides in a year's time. We have received more letters than usual this year congratulating us on our increased utility and the strength and enthusiasm we have thrown into our fights when supporting what seem to be lost causes or putting heart into halting ones. If we have been of any help, certainly we have had a full measure of reward in such letters and we thank the writers once more for them. All this, however, would not have been forthcoming had it not been for our subscribers and advertisers, to whom also many thanks, with some over for the Directors and Staff at Headquarters.

* * *

"Don't let poor Nell starve," Charles II is reported to have said on his death-bed, and poor Nell, otherwise Nell Gwynne, certainly did not starve or want. To-day one seems to hear Sir Ronald Ross calling to us from the Great Beyond, "Don't let my Institute starve for want of funds," and truly it would be a sin to do so, but, of course, you are not going to allow such a thing to happen, are you? Only *please* send your subscriptions in soon. Do not, like the district visitor in the film "Divine Love," take time to make inquiries and so arrive only to find the patient dead. Exchange and other restrictions are no excuse for delay; any bank will take your money and pass it on if you will but hand it in.

* * *

The world at large studies TROPICAL LIFE, and all our readers must remember that the Ross Institute (Putney Heath, London, S.W.15, Major Lockwood Stevens, liaison officer) has no endowment fund and that for two years contributions have been 25 per cent. below expenditure. Cannot this drain be checked? It will be if our readers, without delay, send their mites as well as their mighty atoms. We feel certain that everywhere everyone will hear and has been hearing

Sir Ronald's call and will answer it to the best—the very best—of their means. Therefore, thanks to you all in advance. Your Christmas will be the merrier and New Year the happier for having answered the call of Sir Ronald Ross.

* * *

Three items to note in this issue: (1) The Egyptian Section on pp. 231, 232; (2) pp. 233, 234 devoted to H.M. Eastern African Dependencies. Here we notify that they have moved across to Grand Buildings, Trafalgar Square, W.C.2.; and (3) a résumé of the report of the Sudan Plantations Syndicate, Ltd., so far as their cotton production is concerned (see pp. 228-229).

* * *

At the meeting of the sisal sub-section of the London Chamber of Commerce on October 26th, Mr. Campbell Hausburg was re-elected chairman and thanked for his help during the past year, whilst Lord Cranworth and Major Conrad Walsh accepted the posts of vice-chairmen. It was an interesting meeting in several ways, not least of all on account of the discussion on arbitration.

* * *

In their issue of October 27th *East Africa* reported a former discussion on this important matter, to buyers, shippers and planters alike. It is on p. 160, headed "Government and Congo Basin Treaties." Under a sub-heading "Criticisms of Sisal Arbitrations," the discussion, started by Mr. Charles Wilson, chairman of the Court of Arbitration of the London Chamber, was as amusing as it was useful, and certainly it was useful. It reminded one of the quip that H.M. Government should seriously consider imposing an entertainment tax on some of the meetings and discussions held in the City of London, but as the idea might have to be extended to the House of Commons, it was squashed. Besides, in such cases there are inclined to be vast differences of opinion as to what is amusing and what is not. Finally, the *pros* and *cons* of forming a Portuguese East-African sub-section of the Chamber were discussed, and such a body certainly should be a distinct advantage to Anglo-Portuguese interests in East Africa. We discussed the matter over the 'phone with

Mr. John Mardell (well known for his Portuguese and other translation work) whom we used to encounter at the Portuguese Chamber of Commerce during the War, and as he told us that the Portuguese Chamber, then nearly opposite Cannon Street, no longer existed, one can well understand how useful a Portuguese sub-section of the London Chamber would be at times.

* * *

At the last meeting of the West African Section of the London Chamber of Commerce, Mr. David Jones of Messrs. Elder Dempster & Co., Ltd., was elected chairman for the forthcoming year, and Mr. E. J. Organ of Messrs. Cadbury Bros. Ltd., vice-chairman. Here, most certainly, the section has a judicious blend of transport and keen business knowledge on the one side and the manufacture of West Africa's leading raw material, with close local knowledge, on the other.

* * *

A post-card from "Our Friend" (Dr. Ciferri) in October, addressed from Italy, carried three stamps on it. In the centre the head of Julius Cæsar and on each side the head of King Victor Emmanuel. The likeness in the profile of the two men appeals to us as being very striking, especially if the Roman general's chin were raised in a way similar to that of the King of Italy. The similarity in the "modelling" from the nose to the chin is particularly striking despite the fact that the centre head carries no moustache.

* * *

Until the condition of agriculture and the prices for agricultural products improve, farmers here and planters abroad will have little money to spend, even on necessary implements and apparatus. Knowing this, Messrs. Cooper, Pegler and Co., Ltd., will be showing some special lines of spraying machines at the Smithfield Cattle Show about the middle of December, and hope that all our readers who can reach the Royal Agricultural Hall at Islington will find their way to Stand 217 and inspect their show of Vermorel "Eclair" sprayers, at prices ranging from 6s. upwards. In spite of the low prices, every appliance shown will be up to their standard, the reputation of which has stood at A1 for thirty years.

* * *

The report of the Executive Committee of the Empire Cotton Growing Association issued in the middle of October, gave interesting returns of cotton production within the Empire. In Nigeria low prices seem to have pulled the export down to 5,000 bales, whilst possibly as much again went for home consumption. There is no doubt that Northern Nigeria alone could produce, according to the seed used, up to 15,000 bales. In the Anglo-Egyptian Sudan the final figures

for the cotton season, 1931-32, gave a total crop of 234,744 bales of 400 lb. Of this, 191,200 bales were Sakel cotton from the Gezira. The remarkable improvement in the yield of cotton grown in the Gezira is shown by the fact that the figure given corresponds to a yield of over 4 kantars of lint per feddan (i.e., over 400 lb. an acre).

The report concludes with details of the research and experimental work to be carried out in Nyasaland and also—in connection with the Imperial Agricultural College—throughout the West Indies.

The Empire's Live Wire.

The Royal Empire Society "at Play" in November.

ALL work and no play makes Jack and Jill a dull couple, not so useful as they should be to help make the world in general, and the Empire in particular, as able and willing to push ahead. To put a little non-alcoholic stimulant into their Fellows, their families and friends, therefore, the following was the Royal Empire Society's prescription for November. From all accounts it proved to be immensely successful, and all that is asked for is a repetition of the treatment generally under the guidance of Mr. E. G. Parker, social organizer and reception secretary to the R.E.S., as Head Nurse, or perhaps Matron:—

November 2nd. A descriptive film of the Port of London, with explanations by Mr. A. E. Wildey of the Port of London Authority.

November 10th. A visit to the weaving mills, dyeing and finishing works of Messrs. Courtaulds, Ltd.

November 15th. An afternoon At Home in the capacious smoking room, to meet the wives of the Cabinet Ministers. Sir Archibald Weigall, Chairman of the Council, Lady Weigall and Lady Elibank receiving.

November 18th. A ramble through Westminster Abbey. Major Heydeman, Lecturer on the "History of London," as cicerone.

November 21st. Informal evening meeting after an excellent popular (3s.) dinner in the Society's dining rooms, when the Governor of Mauritius (Sir Wilfrid Jackson) told us about that island.

November 23rd. The New Zealand Reception and Ball at the Carpenters' Hall (a wondrous place) in the City.

November 30th. A visit to Messrs. Crosse & Blackwell's factory has been arranged and, in the evening, a House Dinner with Lord Stonehaven as the principal guest.

Since all this and more is only the lighter side of the Society's work, it is little wonder that its Fellowship approaches the 20,000 mark, and includes some wonderfully useful men and women.

PALM AND OTHER OILS—PART IV.

Some Notes on Soya and Other Oils.*

LIKE soya raised in other countries, the Philippine beans are very nutritious on account of the fats, carbohydrates, and proteins which they contain. Their protein, unlike that of other vegetables, is similar to animal proteins and seems to fulfil all physiological requirements. Delicious cakes, cookies, sauces, soup, milk, custard, ice cream and other tasty preparations have been made from Philippine soya beans.

Philippine soya-bean oil consists principally of the glycerides of linolic, oleic and palmitic acids. It also contains small quantities of linolenic, stearic and arachidic acids. In composition, Philippine soya-bean oil resembles rice oil, kapok-seed oil, peanut oil and cottonseed oil in that all these oils consist principally of the glycerides of linolic, oleic and palmitic acids, though in different proportions.

Then we come to a concluding paragraph that could well be copied out and stuck on the walls of the Gold Coast and other colonies where new centres are being developed rather more quickly than reliable supplies of provisions to feed the natives can be secured. Some little time back considerable efforts were made to stimulate the planting and production of the soya bean throughout the Gold Coast Colony if not elsewhere in West Africa, the reason given for such activities being that (1) the agricultural resources of the Colony needed development, (2) that such development could only be secured by substantial increases in the population, and (3) that no such increases were possible without adequate supplies of food-stuffs, and that at present the supply did no more than maintain the present population. Therefore, it was urged, plant soya extensively and enable newcomers to be sure of their meals and thus be encouraged to stay. So far as we can remember it was merely a matter of food that was sought for. In the same way that all grasses do not, by any means, equally nourish horses and stock, so all food-stuffs do not adequately nourish humans. This fact makes the concluding paragraph of the article by Messrs. Cruz and West in the *Philippine Journal* mentioned particularly important. This is what they say:—

“The diet of the Filipino masses consists largely of rice and is more or less deficient in fats, proteins and vitamins, which are the principal nutritive constituents of soya beans. To supply the present deficiency it has been suggested to include soya beans as a regular part of the Filipino diet. A diet consisting of about 20 per cent. soya and 80 per cent. rice gives a fairly balanced diet which should, of course, be

supplemented by meat and fresh vegetables when convenient.”

* * *

Talking of rice, the same authorities (Cruz and West), coupled with Vicente Aragon, tell you that rice oil is obtained from rice bran, *i.e.*, the seed coat and germ of the rice seeds. Their investigations determined the composition of rice oil obtained from bran of the *ramai* variety of rice. The results showed that this kind of rice oil consists principally of glycerides of oleic, linolic and palmitic acids. *Ramai* rice oil is very similar in composition to kapok, cottonseed and peanut oils. These oils are suitable commercially for the manufacture of edible products and soaps and for other purposes for which cottonseed oil may be employed.

A serious drawback to the commercial development of the rice-oil industry is that the oil is not easily expressed from the bran. The hydraulic press of a coconut mill, with the usual pressure for extracting coconut oil—say 4,000 lb.—obtained practically no oil from the rice bran. To produce rice oil commercially it would seem that an extraction plant would be necessary. Possibly the great pressure shuts the oil in when a substance like bran has to be treated, and so the great pressure defeats its own end. One would like to know, since the germ of the rice as well as the seed coats are mentioned, what proportion, in weight, the one has to the other; whether by winnowing or other means, the germs could be separated and if so, whether they have a bigger oil-content than the bran, and then, with the germs alone (if it paid to separate them) whether a pressure process would not be sufficient and cheaper and so, therefore, the best. Weight for weight, one feels that a ton of germs would give more oil, by any process, than a ton of bran.

* * *

The same searchers after knowledge in the same issue of our contemporary also discuss *talisay* oil, *i.e.*, that which is extracted from the kernel of the *Terminalia catappa* Linn, giving an oil known in India as almond oil because it resembles oil of sweet almonds. The late Sir George Watt in his “Economic Products of India” spoke enthusiastically of the Indian oil, saying that (in India) it can be produced cheaply and does not become rancid so readily as the true almond oil. In the Philippines *Terminalia catappa* is sometimes cultivated as a shade tree. Its oil—*i.e.*, *talisay* oil—consists principally of the glycerides of oleic, linolic, and palmitic acids and is similar in composition to kapok, cottonseed and peanut oils.

* The above notes were extracted from articles by Aurelio Cruz and Augustus West in *The Philippine Journal of Science* for May, 1932. Vol. 48, No. 1.

Reverting to soya beans, the Research Officer, Division of Plant Industry, South Africa (Mr.

F. M. du Toit) also commends soya to tropical centres in a pamphlet issued by him on "Soya Beans in the Union." In the same way as we have just shown the advantages of including soya with rice and other diets, so Mr. du Toit advises an increased use of it both for human consumption as well as to supply protein, often badly needed for livestock.

* * *

We received a call from Mr. J. L. North, well known to most of us, partly through the good work he did as Curator of the Royal Botanic Society of London, but partly, perhaps mainly of late, on account of the enthusiasm he has shown in his efforts to prove that soya beans can be cultivated in many areas in this country. This he has done until we have been forced to dub him Soya-bean North. We were glad to see him looking fit and well. *The Vegetarian News* for November included a double-page photograph of Mr. North in the midst of stacked soya plants grown by him at Brentford in Essex.

* * *

And now come three more publications, viz. :—

(1) The M.A.J. for October with articles on The Coffee Clear-Wing Hawk Moth, pp. 508-517; the Inter-Departmental Conference at Kuala Lumpur, in August, pp. 527-546; and other articles. Price 50 cts. (Straits), say 1s. 4d. post free.

(2) General Series No. 10, "Insects of Coconuts in Malaya," by G. H. Corbett, B.Sc., F.E.S., Government Entomologist in the F.M.S. and S.S. Price \$1 50 cts. (Straits), or about 3s. 9d. post free. Many plates, one of our friends the locusts (No. II), Plate I in colour, of many troubles in the egg, chrysalis, cocoon and caterpillar stages. Plate IX offers illustrated suggestions for piling palm trunks so as to burn them as completely as possible. Coconut and most other planters should have this book, even if it has only got a paper cover.

(3) From Kenya comes Bulletin No. 10, being the bound up reports of eleven papers read at the Conference dubbed "Coffee Planters' Days," held in Nairobi on June 29th and 30th last, very full of up-to-date and, can we say, advanced information on the subjects treated. Full details will be found in our usual Coffee Market news further on.

* * *

Trial shipments of produce in East African sisal bags sent out by Major Dale from H.M. Eastern African Dependencies Office in London, have been made as follows: Of 2,500 empty bags sent out, 112 left East Africa filled with maize, 27 with groundnuts, and 90 with coffee. What has been done with the balance of the bags, if used, has not been recorded so far. Now we are on the look out for reports on the state of the bags (compared with those made from jute) on their arrival.

Empire Films.

Malaya to the Fore.

A SECOND and much enlarged edition of the catalogue of the Empire Marketing Board's film library has just come to hand, most interesting, most instructive, but "Why, oh, why" go to Malaya for the film on sisal (Index No. 410, Cutting and Preparing Sisal for Market in Malaya), when you have East Africa. Now film 408—Oil-Palms in Malaya—is all right, for has not the *Bulletin* of the Imperial Institute just issued (Vol. xxx, No. 2, 1932) told us on p. 197 how Malaya is progressing as a producer of oil-palm products and includes the following table to confirm their claim:—

AREAS OF OIL-PALM PLANTATIONS IN MALAYA
(FEDERATED AND UNFEDERATED).

YEAR	ACRES	YEAR	ACRES
1925	12,548	1928	24,730
1927	19,755	1929	31,709

There were in 1930 45,247 acres planted, of which 19,475 are recorded as mature and 16,391 acres as immature. Of course Nigeria should have been chosen as well, but those who make or who see the films do not in such a case want pre-historic methods. Cacao has two films devoted to it, but we found the wording in the description of No. 53 a bit slack. It tells us that the film shows "The production of chocolate and cocoa beginning with the harvest of copra in British West Africa and concluding with the manufacturing processes in Great Britain." We should have thought that someone responsible for the publishing of the catalogue knew more about the tropics and their products than to mix up copra and cocoa like that.

The general public, barring mistakes, should learn much from these films about the tropics and their products; products which keep busy to-day half the White World; products which we claimed during the War not only feed the world but if the purchasing power of those tropical areas falls off, as it has done, the trade of the White World will suffer, as it has done and will do, far more than even we ever dreamed of ten or fifteen years ago.

Those interested in such films, and everybody ought to be so, should write to the Secretary of the E.M.B., 2, Queen Anne's Gate Buildings, London, S.W.1, for a copy of the catalogue, and also for conditions for borrowing the films. These, we understand, are available for approved displays at which no charge is made for admission. There should be a good demand for them, not from those who like to get something for nothing, but from those willing to give up much time for nothing.

There is one "Talkie" among the many, viz., No. 61, dealing with apple production.

REVIEW.

CACAO (Second Edition). By Dr. C. J. J. Van Hall, formerly Director of Agriculture in Surinam, and Director of the Institute for Plant Diseases, Buitenzorg, Java. Pp. 504 + 10 pp. Index. 176 illustrations plus a Table giving the World Production of Cacao. Price 28/- net. Weight 44 oz. Macmillan & Co., Ltd., St. Martin's Street, London, and at Melbourne, Toronto, India, and America.

Preliminary notices have already been given of this new edition of Dr. Van Hall's well-known book in which much that will be found in the first edition has been revised and many alterations made. The author lays stress on a new chapter—No. VII—on "Selection," which must be noted. Chapter X is likely to draw the casual attention, both of the student and old hand, on the first glance through, as it covers no less than 91 pages and deals in detail with the countries producing cacao. Particulars of their outputs over a number of years are given, some of which are new to us. The New Hebrides for instance (benightedly even if benignly run, by the dual control of England and France, a policy which can only act against the interests and well-being of the people, and which should have been given up years ago, certainly when the world was rearranged after the war), we learn for the first time, exported two tons (1,000 kos each) of cacao in 1910, and 2,000 in 1930, with 1927 as top-notch with 2,344 tons. One is not surprised to read that the labour question there is a difficult one; in the beginning the natives were employed on the estates, but since 1923 a regular immigration of families from Indo-China has taken place. Have the natives as a result improved or further deteriorated since 1923? Of course Dr. Van Hall does not touch on so thorny a question, but we should like to have a truthful answer to our query all the same. Samoa started also with two tons, but in 1900. In 1930 she exported 700 tons, with banner years in 1914, 1,050 tons, 1917, 1,266 tons, and 1924, 1,171 tons. The Philippines are estimated to have produced about 1,100 tons in 1925, but it is in native hands and difficult to say exactly. New Guinea's exports—when any at all—average about 100 tons per annum, but in three years, 1914, 1916 and 1926, there are only question marks. Why so?

And so the story goes on, big centres and small, but we must leave our readers to study that chapter themselves.

Chapter VIII deals with the fermentation, washing and drying of the beans. This section is fully illustrated, showing the work in different stages being done in Java, Ecuador, Surinam and Trinidad. Plans of various dryers and drying houses follow, all of which every cacao man will read carefully. Chapters IV and V, dealing with the botanical characteristics of the plant and the varieties of cacao, with numerous illustrations, reminds one of Jumelle's book, published at the end

of last century. The next chapter, No. VI, discusses cultivation and plantation management, but there is no space, unfortunately for us, to go into that. It is a fine book by a master-mind on the matters discussed. This makes it a pleasure to browse over and a profit to study.

We have just received from the Tachoku Imperial University at Formosa, in Japan, a 700-page study (in English) on the Satsuma orange, known in Japan as the Unshu Mikan, or orange of Wen Chou, and in America and elsewhere as the Satsuma orange. Yet strange, we are told, p. 12, that the old original Wen Chou orange had a thick rind and was very acid and good for flavouring fish as limes in the West Indies are to this day. The book proper, with Index, covers 626 pp. These are followed by 53 plates on thicker, stone-coloured paper of the leaves (1 plate), of the shapes and comparative sizes of the oranges (46 plates), the whole concluding with 6 plates with sketches of the trees, including one original, the largest ever recorded and the oldest tree. No price is mentioned. The book weighs, naked, $4\frac{1}{2}$ lb. (72 oz.), and copies can be had from the University and from the well-known Maruzen Company, Ltd., Tokyo, Japan. There must be an enormous amount of hitherto unknown useful knowledge stored away in it. This being so, we hope planters at all orange-producing centres will secure copies.

* * *

A staunch and stolid member of the sugar world has been taken from us in the person of Mr. William Scott Herriot of the Mirrlees Watson Co., Ltd., who died, very suddenly we understand, on November 15, leaving a gap in the sugar world, especially in connection with the turning out and further improvement of sugar machinery, that will not be filled in a hurry. We were thinking a good deal of Mr. Scott Herriot when writing our comments on the orders for sugar machinery for India (see p. 235), little knowing at the time that he had already passed away.

* * *

The Director of Research at Amani (Mr. W. Nowell) has issued his report on the prevalence of coffee berry disease in the Sotik and Nandi areas of Kenya. The matter has received the most careful attention, both by Mr. Nowell and Mr. J. McDonald, Senior Mycologist to the Kenya Department of Agriculture. The situation seems more complicated and serious than was at first expected. The incidence of coffee berry disease is apparently most erratic from place to place and from year to year, and the reasons of these fluctuations are but slightly understood, we are told, so need further careful study. We feel it will receive that attention.

Pyrethrum Products.

"The Japan Trade Review" on their Trade.

WE owe the following particulars and returns to the above contemporary whose address is either The Yokohama Chamber of Commerce or, better still, The Yokohama Commercial and Industrial Museum. As so many of our readers are interested in pyrethrum for insecticides and other purposes we propose to give rather a full set of figures whilst we have them by us. America appears to take, and especially to have taken, the bulk of the blossoms; why so? During the twelve years 1919-1930, America is returned as having received 8,059,000 *kan* (*kan* roughly 8½ lb.), against 205,232 *kan* that came to this country. In 1922, whilst 481,776 *kan* were exported, a blank line is put to the countries mentioned below. Let us look at the details for the years 1923-1931:—

EXPORT OF PYRETHRUM BLOSSOMS FROM JAPAN.

	TOTAL EXPORT	TO U.S.A.	TO U.K.	TO CANADA AND AUSTRALIA
	KAN	KAN	KAN	KAN
1923	276,560	119,872	16,256	7,872
1924	554,288	482,160	16,400	60,192
1925	891,168	846,944	10,800	24,208
1926	1,061,568	979,776	37,952	35,360
1927	1,093,744	1,008,064	15,936	39,600
1928	1,672,768	1,464,944	9,344	130,512
1929	1,331,465	1,119,984	13,136	51,236
1930	959,952	754,720	38,656	24,640
1931	701,520	520,000	51,000	34,000

Why the export has fallen off to the degree shown does not seem clear; the reason given of the grave depression throughout the world not being, to our mind, a satisfactory one. Here are the details of the rise and (possibly temporary) fall in the trade:—

In 1881 pyrethrum powder was first imported into Japan as a flea-powder by Mr. Tasaburo Shimidzu, proprietor of the Keirindo Apothecary at Fushimi-cho of Higashi-ku, Osaka City, who imported same from a British company through a foreign importing concern at Kobe and sold same throughout the country as powder against fleas. Japan may be said to owe her present export of pyrethrum to Mr. Eiichiro Kamiyama, who planted same for the first time in Kii Province and later on engaged in the manufacture of pyrethrum powder as well as its export to foreign countries, which has shown such steady development year by year as now to become one of Japan's leading items of export.

Dried pyrethrum blossoms, which were experimented on for the first time by Mr. Eiichiro Kamiyama in 1905, were exported in 1907 to the extent of about 4,000 *kan*, and increased steadily thereafter until it reached 58,000 *kan* in 1912, subsequent to which a sudden impetus was given to the export of Japanese pyrethrum due to the scarcity caused in overseas

markets on account of the suspension of supply from Austria, the leading supplying nation in the world, on account of the outbreak of the Great European War. This made the total increase run up to 860,000 *kan* in 1919. This served as a great stimulus in increasing its production, especially in the Kansai district as well as Hokkaido. The overseas demand gave signs for a while of a slight falling off upon the termination of the War, but it soon regained its popularity in the overseas markets due to its superior quality as well as the low price. This brought about a steady annual increase until 1929, since when there has been a considerable falling off on account of the grave depression throughout the world, as may be seen from the fact that, whereas in 1926 to 1929 the exports reached the colossal volumes of 1,000,000 *kan* and over, and occupied an important rôle in Japan's exports, they decreased in 1931 to 700,000 *kan*, as may be seen from the above table.

Those of our exchanges, and other readers, who spend big sums on newsprint (paper) every year, one can almost say every month, may be interested in noting the following estimate, taken from some notes in a morning paper, of a reasonable cost for turning out such paper against the higher figures that have been published.

"My reply must be given by the following figures which were shown to me by a newsprint man:—

FURNISH.

	£	s.	d.
Mechanical Pulp at 38s. per ton ...	2	17	0
Sulphite Pulp at £7 per ton ...	1	15	0
Waste Paper, Tolls, Haulage and Stowage ...		5	0
Loading and Chemicals ...		4	0

CONVERSION.

Wages, Manufacturing and Maintenance ...	18	2
Felts, Wires, Lubricants, &c. ...	6	10
Power—Coal and Electricity ...	12	6
Finishing Materials ...	3	11
Repair Materials ...	5	0

ESTABLISHMENT.

Directors' Fees, Salaries, &c., Office and Laboratory Wages ...	7	11
Rents, Rates and Telephones, Storage Rent, Insurance, General Expenses ...	5	5
	8	0

"Incidentally, I hear that Canadian newsprint is being reduced still further, from 47·50 dollars to 46 dollars for delivery New York. I expect to see the English price for newsprint next year well under £10 a ton. Already newsprint is being offered for next year by British manufacturers at £10 10s. a ton."

Having had some experience of the cheap American newsprint trade in the 'nineties, we feel above figures may interest some of those we worked with overseas, if they are still at the "same old job."

EMPIRE BROADCASTING. No. 2.

British Broadcasting Leads the World.

(Continued from the August issue.)

BEING entirely independent of advertisement matter that makes up so much of the American and French programmes, and having ample funds provided by the annual ten shillings licence paid by a British public of well over four million possessors of wireless sets, exclusive of "pirates," the B.B.C. has been able not merely to provide excellent entertainment to suit all tastes, but it has gradually and subtly forced on the public a form of adult education that is having an immense effect on the people at home. A few years ago people wrote to the papers regularly and persistently to complain of the objectionably large amount of time given to "highbrow" music and "dull" lectures. Nowadays there would be an outcry if any reduction was made to the time given to these subjects.

In a month of listening you can hear half a dozen or more vaudeville performances, each with a bill of stars which no ordinary music hall could afford; a similar number of concerts from a full orchestra of the picked instrumentalists in Great Britain, with the world's leading conductors and soloists, several series of short lectures delivered by the greatest British exponents and professors in the subjects discussed; some running commentaries of big sporting events (in a tennis match, for instance, you not only hear an account of the play in progress and the cheers of the crowd, but you actually hear the ball being struck; and with a little imagination you are there on the spot); a few plays; a great deal of dance music by the leading London and provincial bands; a vast amount of light music and entertainment; and if someone flies to England in record time, you will hear him tell his experiences a few hours later. A crisis arises, and you will promptly hear the opinions of leading men giving you both sides of the question.

Those are the sort of things you will hear from the new Empire Station, and to a lesser degree from the old experimental station until the new one is ready.

Now, you will want to know how to hear all this:

The Complete Wireless Set.

It is not necessary to possess previous knowledge of wireless or electricity in order to install and operate a wireless set unless you happen to be one of those people who have a strong antipathy for everything that savours of the technical. In such a case you would do better not to buy a set until you can get a friend to put it

up for you and teach you to use it, and in any case be sure to go to reliable firms, experienced in tropical or other work if you are living abroad.

The remarks below are to provide you with the knowledge you should possess *before* purchasing a wireless set in order to avoid disappointment and mistakes, for you must learn certain practical facts and familiarize yourself with a number of words used in the jargon of wireless which may look somewhat alarming in print to the uninitiated, but in fact are bandied about by the young school children and elderly ladies in England with fluency and ease.

First of all you must clear your mind of two possible misconceptions; firstly, that the sort of wireless set used in England to listen to home broadcasts is of use for the Empire Station; and secondly, that a "wireless set" is the only equipment needed. The answer to both these claims must be in the negative.

It is quite unnecessary to try and master any knowledge of how wireless works. All that you need to be clear about is the simple sequence of events. When, for instance, you hear Sir Daniel Hall give his regular talk on Agriculture he is doing so from a studio in the centre of London. His voice is conveyed by electric cables to the Broadcasting Station at Chelmsford, where there is plenty of space for the engines, plant and high masts necessary. From the *aerial*, swung between the masts, something electrical is thrown out, and it is usually assumed that the something is in the form of invisible electric vibrations or waves, because, whatever it is, it responds to the same mathematical laws of waves in water or vibrations in air. These vibrations are picked up by your aerial and conveyed by it into your wireless set together with the vibrations from hundreds of other wireless stations transmitting at the same moment. By suitably adjusting your set it can be made to respond to the particular electrical vibrations being sent out from Chelmsford, or, in other words, "tuned to the Empire Station." By means of glass valves in the wireless set these extremely feeble vibrations are immensely magnified and modified, and are then led to your headphones or loudspeaker, where they are converted into sound, thus enabling you to hear Sir Daniel Hall give his talk on Agriculture from London.

A satisfactory complete installation for receiving the Empire Broadcasts overseas may cost in England from £7 to £25 or more, plus carriage and freight, &c.

(To be continued.)

The Subtle Slavery of Sugar.

WE tender hearty congratulations to Messrs. Nortz and Co. (82, Wall Street, N.Y.C.) on their six-paged all-sugar report of October 19th. It conveys a better and far-more-reaching idea as to what the world is up against as regards sugar than any homily on the subject that has come our way so far, and quite a number do cross our path.

Especially were we pleased to peruse the following couple of paragraphs on p. 5, in which production costs of to-day and yesterday are compared in the following forcible manner:—

"As to producing costs, all our former ideas on this point have been completely upset by recent developments and this question, which was formerly of paramount importance, has now been relegated to the background. There are many reasons for this, into which we need not enter here, the chief of which are industrial saturation in most countries and the so-called mechanical age. The problem of many million people has become—not so much how to prosper, but how to provide for the barest necessities of life. Ideas as to the standard of living have become obsolete in the presence of the almost frantic desire of the masses for constructive activities and economists are pondering how to conciliate this desire, the cause of low prices through over-production, with the necessity for an improved economic situation through higher commodity values.

"Our figures show how countries exporting sugar, actuated by a common desire to overcome existing difficulties through intelligent effort, have succeeded in helping matters along. If the result has not come entirely up to expectations, at least worse things have certainly been prevented. On the other hand, the same figures show how countries not included in the Chadbourne plan have increased their production, especially the American Colonies which are protected by the 2 cent duty. There seems to be nothing to hope for in the way of a restricted output from the protected countries, as they are primarily concerned in looking after their own interests. In regard to the American Colonies in particular, we continue to feel that the time is not far off when this country will modify her sugar legislation, giving more consideration to Cuba, which was formerly one of her best customers, and also to the American tax-payer, who will continue to play the role of the forgotten man until such time as his vote will be needed."

So much for production. On the refining side we are told that the annual meeting of Messrs. Tate and Lyle Ltd. will be held on December 6th, when a dividend of 16 per cent. will be given to the shareholders, whilst £200,000 goes to Reserve, £55,000 to Investment Reserve, £10,000 to Dividend Reserve and £65,111 carried forward. This amounts to over £330,000 plus a 16 per cent. profit. Such is life to-day. The producer works at a loss and the middleman as above.

Re Sugar in India, see p. 235.

Sugar in Mortar.

NOTHING, it appears, is new under the sun, the mixing of sugar with mortar certainly is not. Now we are told by Mr. David E. Headley, who knows British Guiana and also New York very well, that as far back as March, 1931, he wrote to the Mellon Institute of Industrial Research at Pittsburgh telling them that as far back as 1873 it was a well-known fact that for building purposes in B.G. the old Dutch custom was to mix sugar with lime—sugar then, as now, being their staple industry. As a result, when replacing old bridges, &c., by new ones, it was found all but impossible to break away the stones or bricks; they clung together as a solid mass, the binding power of sugar with lime being so great. With the enormous surplus of sugar at present a burden to world-consumers it would be a boon to see some of it put to such new uses. This applied to raw sugar only, there was no refining in those days.

Over a century ago, going still further back, when molasses were not in demand, the Dutch bricklayers, known locally as "masons," mixed them with their mortar. As a result, in the interior of British Guiana are to be found brick and concrete structures on sugar plantations and elsewhere, abandoned perhaps for over a century; yet in spite of this, in spite also of the wear and tear on buildings due to the climate, such structures to this day remain practically untouched by weathering conditions, whilst newer buildings, fifty years old, perhaps less, show signs of effects from the climate. These newcomers can easily be broken up, but not the old Dutch structures.

Cotton Planting in the Sudan.

The Importance of the Native Buyer Everywhere.

ADDRESSING the Twenty-fifth Ordinary General Meeting of the Sudan Plantations Syndicate, Ltd., Mr. Alexander MacIntyre, as the Chairman and Managing Director of that body, after discussing the financial position, moved on to their cotton-producing activities. Here he claimed, putting his remarks in a nutshell, that in spite of the low prices ruling throughout the year under review, results justified his claim of the previous year that, even with low prices, given good yields, the Syndicate should be able to make a profit, and therefore, with better prices and a normal yield, they need have no anxiety for the future.¹ During the year prices have continued low, yet in spite of this, the results of the accounts laid before them were satisfactory.

¹ May we suggest that those readers who are interested in cotton prices should turn to p. 237, and also refer to the tables of values in previous issues.

Dealing with the actual cotton, the Chairman informed those present that:—

"Regarding cotton sales, it must be as great a satisfaction to you as it is to me to know that the whole of the 1929-30 and 1930-31 cotton stocks have been disposed of. So far, spot and forward sales of the 1931-32 crop have been satisfactory. The credit for these sales is largely due to the unremitting efforts on our behalf of Sir William Himbury, of the British Cotton Growing Association, and to our Brokers, Messrs. Wolstenholme and Holland and Messrs. Reynolds and Gibson, and I wish to take this opportunity of thanking them on your behalf. (Applause.) With regard to the past season's results, at Zeidab the area planted in cotton was 5,805 feddans, which produced a good crop amounting to 24,072 kantars, and gave the high average yield of 4'14 kantars per feddan.

"In the Gezira an excellent cotton crop was produced, the yield being high and the quality of the cotton good. The area planted in cotton was 174,788 feddans, as against 175,418 feddans in the previous year. The total cotton picked was 705,805 kantars, compared with 227,781 kantars; the average yield being 4'03 kantars per feddan, as against 1'29 kantars in the previous year. The favourable climatic conditions experienced last season, together with the steps taken to combat leaf-curl, black-arm and other pests, have given these satisfactory results.

New Season's Prospects.

"With regard to this season's prospects, at Zeidab, where the cotton crop is planted early, in May, the area under cotton amounts to about 5,300 feddans, and the crop, judging from the results so far obtained, promises to be quite good. Cotton, so far picked, amounts to 20,450 kantars, or an average of 3'83 kantars per feddan over the whole of the Syndicate's and native-owned lands. In the Gezira, where the bulk of the sowing takes place in August, the area planted is about 175,000 feddans, which is practically the same as last year. A portion of the crop is later than at this time last year because the sowing of some areas was delayed by the rains. (Kantar = 99'05 lb. Feddan = 1'038 acres.)

Cotton Prices.

"I told you last year that with good yields and even with low prices we should be able to make profits, and that, granted normal yields and better prices, we need have no anxiety for the future. In view of the low prices ruling throughout the past year, I think that the result of this year's accounts confirms this statement. With regard to cotton prices, without some revival in trade it is difficult to foresee what the trend of prices will be. With any such revival I think that we may expect a rise in the price of cotton. The American Bureau Report would seem to indicate a reduction in the

American Cotton Crop of approximately 5,000,000 bales compared with the previous year, and latest estimates indicate an Egyptian crop of about 4,200,000 kantars, as against a normal crop of 7,000,000 to 8,000,000 kantars. The low price of cotton should contribute to less cotton being grown and less supplies of the raw material being available. Consumption in America, Lancashire, Japan and India has increased, but, as pointed out, much will depend on an improvement in trade generally. On the other hand, I cannot see how world-wide trade can improve unless there is a rise in the prices of all commodities. The best customers are the masses engaged in the output of such commodities as cotton, wheat, rubber, tin and copper, and in days when these were sold at prices which at least covered production costs, there were millions, especially in the East, of potential buyers of manufactured goods. When they were earning an average of about 10s. a week, they had money to spend. To-day they receive probably one-third of this amount, and although this, supplemented by the produce from their land, enables them to live, they have no surplus money to spend and cannot be good customers. The native who used to wear several cotton robes in a year has now to be satisfied with one, and this example is only one of many."

We are pleased to hear that Sir Edward Davson, Bart., has been elected to a seat on the Central Board of Barclays Bank (Dominion, Colonial and Overseas). As a world-wide traveller, and an authority on Empire and business affairs, his help and advice will be most valuable.

(Continued from p. 230).

the debate that followed the King's Speech when His Majesty opened Parliament on November 22nd, this matter of the greater utilization of coal received prominent attention, as when we were told by the Prime Minister in the House of Commons, whilst outlining the Government Policy in regard to unemployment, of the possibility of reviving the mining industry through the development of the hydrogenation process of extracting oil from coal, and there is reason to believe that a British firm would be prepared to invest a considerable amount in such an enterprise if assurance were forthcoming of continued protection against imported oil and petrol, and immunity from Excise duty.

The wise men of India, therefore, like the wise men over here, are fighting hard to help others, and doing so in a way that must benefit every one. May the New Year show steady progress in these endeavours even if perfection is not reached by January, 1934.



"Tropical Life" Friend.
No. 330.

Professor H. K. SEN, M.A., D.I.C., D.Sc.Lond.,
F.C.S.Lond., &c.

*Director of the Department of Applied Chemistry,
Calcutta University.*

"OUR FRIEND" this month should have made his appearance in these pages some time ago, but he preferred to dodge our invitation by escaping to Europe, possibly in order to get married to the eldest daughter—Fritzi—of Hofrat Professor Emich of Graz, Austria, and has only recently returned to Calcutta where we sincerely hope both Professor and Mrs. Sen will enjoy good health and find life pleasant and suitable to their tastes and health in every way.

Born in 1888, Dr. Sen, so far as we can remember, owes all his degrees to London except the M.A., which he obtained in 1911 from the University at Calcutta. Some years after this, in 1916, he joined the Tata Iron and Steel Company, and later continued to add to the practical side of his studies and knowledge of applied chemistry by working elsewhere until, in 1920, he was invited to establish the Department of Applied Chemistry in his old (the Calcutta) University. He is, or has been, the Treasurer of the Indian Chemical Society and was President of the Indian Institute of Chemists in 1929, as well as being a past President of the Chemistry Section of the Indian Science Congress.

Since he established the Department of Applied Chemistry at the University of Calcutta in 1920, Dr. Sen has been the Chief Professor and Head of the Department, which from all accounts is satisfying a long-felt want and doing good in many ways

over a very wide area. Not so very long ago we got into touch with each other over his studies in connection with the utilization of the water hyacinth in Bengal as a basis or raw material for cellulose. This was after Dr. Sen lectured before a large gathering early this year in the Ashutosh Hall of Calcutta University, when he drew attention to the possibility of using rice straw and/or water hyacinth for the production of cellulose. This latter, the water hyacinth of the Bengal waterways, clogs up the channels and seriously hampers navigation. Some call it the "beautiful devil," others the "lilac devil," for it has most attractive blossoms of bright mauve or lilac flowers on an erect stalk. To those who use the waterways, however, it is a troublesome floating weed, so that in centres where it has been planted as an attractive ornament to gardens its presence has had to be prohibited by law. On its useful side, we believe its leaf-stalks, being rich in potash, can be used for manure, and in some places pigs and donkeys are fed, or partially fed, on it; but "Our Friend" has other uses for it.

Known botanically as *Eichhornia crassipes* of the *Pontederiaceæ* family, Dr. Sen claims that under a low pressure of 45 lb. only the masses of water hyacinth as cleared from the waterways could (the same as rice straw) be converted into a pulp which, when carefully washed and disintegrated, would yield a semi-gelatinized mass capable of being moulded into rods or sheets under high hydraulic pressure, giving a product like hard wood, capable of being turned on a lathe, ground or polished when well dried under ordinary atmospheric conditions. Other ways to utilize it, of course, would be to pass it through moulds as is done with vulcanite, &c., and with maizolith and masonite in America. Turned out at a cost of Rs. 300 only per ton (at 1s. 6d. per rupee, this means £22 10s.), the finished product should be able to command a price on the open market capable of eating up all these pests of the waterways and showing a profit as well.

Later on, probably in the January issue, we hope to publish an article by "Our Friend" on the results of his various experimental and investigating work, especially in connection with fuel production and consumption. "The continued increase," he claimed the other day, "in the demand for fuels for automobiles and industrial purposes generally forces us day by day to a greater and greater degree to introduce economy in our fuel consumption, and also to devise means to convert hitherto useless material into fuels or fuel substitutes." In the same way as Mr. Albert Howard is fighting to make the world utilize their waste and unwanted products for increasing the fertility of the soil, so is Dr. Sen working to turn waste and trouble into fuel and so into hard cash.

On this side, of course, we are striving to make one ton of coal go as far as three tons before. In

(Concluded on p. 229).

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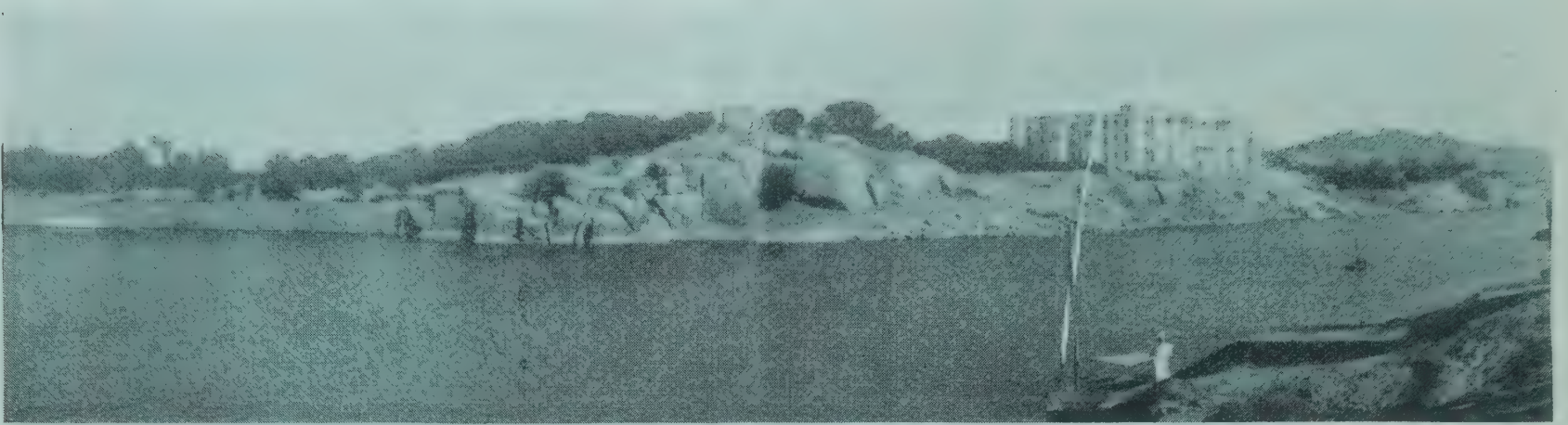
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THE LAND OF THE PHARAOHS.



The Cataract Hotel (right) on the Banks of the Nile at Assuan.

*Come for a sail up the Nile and dream
Of cities three thousand years old that seem
Ages ago to have died.
Yet you'll see them still on every side
Resting on sand and lapped by the tide.
From Cairo up to Assuan.*

THE early history of Egypt, we were told as kiddies, is involved in obscurity. The authority for such a claim, we imagine, arose from the old story that an ancient astronomical observa-

the nations of antiquity, and was distinguished by a high degree of civilization. No wonder, therefore, that the banks of the Nile to-day hold monuments on the earth and below its surface that go back—no one knows for how long. Although Solomon reigned as long ago as 1015 to 975 B.C., Ethiopia therefore, and Egypt as well, must have already become ancient countries when the Queen of Sheba paid her famous visit to the King to which, according still to tradition, we owe the ruling house of Ethiopia to-day.



Heliopolis Racecourse : The Grand Stand.

tion authenticates the tradition that, about 3362 B.C., the Babylonian Hermes or Thoth, who was secretary to King Thamus, and is said to have invented the alphabet, founded Ethiopia on the model of the State to which he belonged, and the organization of this Ethiopia seems probably to have been followed fairly soon by the migration of an Ethiopian colony to what is now known as Upper Egypt. Here it became the nucleus of a nation that subsequently ranked third among

What have we all learned of that blank in history, or of the waste roughly known to-day as the Sahara, during the last half century? A mighty lot, one imagines, but it needs a journey *lentement à l'Anglais, pas à grande vitesse à l'Américain*, to find out a little more of our present knowledge of those areas between Cairo and Assuan, or Assuan, some 550 miles up the Nile, where you encounter the first cataract. This is a journey which in these days you can



Sunset on the Nile.

take with the same ease and comfort as if reclining in front of Shepherd's Hotel, and watching the world pass you instead of floating on the surface of the water and passing two worlds, that of 1,000 years before the days of Cambyzes of Persia, son of Cyrus the Great, whom he succeeded in 529 B.C.; and the world to-day that Kitchener, Cromer, Lloyd and others have given us.

This was the same Cambyzes who, some relate, conquered the Egyptians, killed their god Apis, and plundered their temples. He sent 50,000 men to destroy the temple of Jupiter Ammon, but the deserts of Libya destroyed the army instead. It was the successive dynasties before this tyrant which raised all the wonderful structures which we now associate with Egypt, and which cause us to think that everyone of them that we see to-day can be anything up to 3,000 years old, the Sphinx, the pyramids, grottoes, obelisks, temples and palaces, as well as Lake Moeris and the canals. To-day, 30 centuries after, André Maurois, the well-known writer, tells you that two powers share Egypt between them; Sand and Water. "You go forward to a country of the Moon," Maurois goes on to say, "the solid white masses of sand, the craters with hard shadows, and the giant stones, debris of buried temples. The immense triangles, towards their summits, merge with the vault of the night. You cross beaches that are invisible, tepid, and you follow a rocky track along the



The Creaking Water-wheel.

brink of an abyss. The Sphinx: he rises up in the night of this country of the Moon incredibly big, his paws stretched out before him and the dim light, which just outlines the visage, gives you every freedom to sculpture the eyes, a mouth, and the whole of the monstrous tranquil face."

And now we jump the 550 miles from Cairo, and come right into Assuan—Assuan, which is claimed to be the loveliest spot in Upper Egypt, and offers, according to Philip O'Farrell, two wonders of the world, one ancient, and one modern. On the one hand is the Assuan Dam, a triumph of engineering skill and knowledge, built for the purpose of storing water in Lower Nubia during the winter in order to use it when the Nile is low in early summer, whilst, on the other hand, you have the temple on the Island of Philae, whose submersion, unhappily, was the inevitable result of the creation of the reservoir. Here also at Assuan you have the Cataract Hotel, as comfortable to rest in, or to journey around



An Imperial Airways "Scipio" Machine.

from, as the Nile boat that brought you up from Cairo or the train. The train because, if you look at the map provided by the Tourist Development Association of Egypt (60, Regent Street, London, W.1), under the patronage of H.M. King Fuad, and with H.E. Mohamed Chafik Pasha as President, you will see that if the river journey is too beguiling and takes too long, nothing is easier than to journey swiftly and comfortably by rail alongside the Nile all the way, and still visit and see every antiquity of note, the most convenient centres for doing so being Luxor, 418 miles from Cairo, or Assuan. You can leave Cairo in the evening, dine excellently in a restaurant car in the train, pass the night in a luxurious sleeping berth, and breakfast at Luxor in the morning. From there to Assuan it is a matter of four hours by rail, with intermediate stations and local train services which facilitate day excursions to these centres of attraction that are not in the immediate vicinity of either of these areas.

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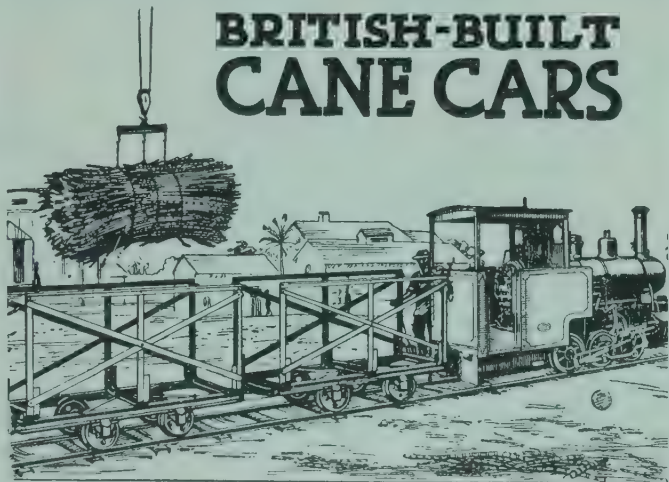
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Tropical Life.

DECEMBER, 1932.

The Peri outside B.E.A.

By One who wants to Settle Down.

REFERRING to the story of the Land of the Pharaohs in the centre of this issue, which story leaves the reader at Assuan, we all know, if we know the geography of the Eastern side of Africa, that, on the map, the Nile, after it leaves Egypt, flows through the Sudan, past Khartoum, the present capital, with its 42,250 inhabitants, facing Khartoum North on the Blue Nile, with its 103,000 inhabitants; both being close to where the Blue and the White Nile join. Higher up still on the White Nile is Omdurman, the former capital of the Sudan under the Mahdi rule, with practically the same population as Khartoum North.

Passing along on what looks like a stream on the map, you reach Fashoda, on the edge of British territory. A name which the frivolous ones of a generation ago associated with "Rhoda and her Pagoda," but which nearly caused trouble between ourselves and France at the time. Let us, however, go back down the Nile as far as Assuan and make the journey by air via Khartoum to Nairobi. Taking the air-liner of Imperial Airways, say the one that leaves the Port of London (i.e., Waddon Aerodrome at Croydon, near where these notes are being written), you leave Croydon on Wednesday at 6 p.m., arriving at Paris 3½ hours later. In the afternoon of Saturday you reach Alexandria, from where you go by rail to Cairo, arriving in the evening. The next morning (Sunday) you leave Cairo at 7.30 a.m., arrive at Assuan soon after midday, and leave for Wadi Halfa about 2.30. Reaching here in the evening, you remain for the night, leaving about 8 a.m. on Monday for Atbara, which you leave at 2 p.m. for Khartoum in the Sudan, arriving in the evening and remaining for the night. The next evening (Tuesday) you reach Juba and stop the night, reaching Kampala in Uganda at 11.15 a.m. on Wednesday (a week after you left London), Kisumu, the principal port on Lake Victoria, three hours later, finally arriving at Nairobi the same evening, just eight days after you leave Croydon, also on a Wednesday evening. This journey costs just under £100, being £99 exactly, or from Assuan to Nairobi £57. Were you to continue up the Nile by water to Wadi Halfa the fare (to Nairobi) would be £49 only, and from Khartoum £41. At such rates the air journey is worth the cost, for the time is incredibly short and the changing from train to train and train to boat and back to train again, avoided. Children

are charged standard fares as or when they occupy separate seats. Even then a family, say, of five people, from South America can fly from London to Cairo and then to Assuan and Khartoum and on to Nairobi for £500, which is, or was, the cost of a state cabin to New York only.

Having arrived at Nairobi, may we revert to the heading of this page, and allow the would-be settler to tell his own tale as it came to us partly by letter from South America at the start, and partly by word of mouth when he called at our office. Whether he ever found his way to East Africa via the offices of H.M. E.A. Dependencies at Charing Cross we cannot say, but the last time we interviewed the Secretary, Major Corbet-Ward, he spoke of several visitors who had interviewed him, and who, from the nature of their inquiries, he felt sure had come from TROPICAL LIFE. Probably this was so, as we always give prominence to the "Welcome Home" each year that London, and particularly the East African Dependencies, have to offer to the sojourner from overseas, and perhaps it is as well for the E.A. office staff that only a proportion of those to whom we describe the advantages and the attractions of East Africa to settle in, continue their inquiries up at Charing Cross, and that is a reminder.

The offices of the Dependencies, or rather the staff that carry on the work, are now ensconced in their new abode on the first floor of Grand Buildings, Trafalgar Square, W.C. Here they overlook the Admiralty Arch and the Mall with its glorious avenue of trees on the one side, heading straight away to Buckingham Palace, and the Canadian Offices, Trafalgar Square, and the future home of the Dominion of South Africa on the other. Certainly they have most attractive and convenient offices both for those who have to work therein as well as for the many visitors who call day by day and week by week.

We have always found that most of our readers have heard of the East Africa Club Dinners and the good work done for residents overseas by the Joint East African Board in London, which, more than once, we have described as being the egg that is kept warm until one day it will hatch out and become a full-fledged Imperial Parliament in London. Without this, the Empire can never ultimately expect to go ahead and progress, as it will do, given such an Assembly to attend to affairs of the Empire at large, leaving the present House of Commons to look after the people at home and the affairs of the Nation, as conducted by the Foreign Office.

At times one feels (and hopes) that we are nearer to so desirable a state of affairs than the man-in-the-street, even, perhaps, many residents in the Dominions and Colonies, have yet learned to believe. Knowing the tale we tell, we are never surprised when we hear that our visitors pine to go to East Africa. Unfortunately, no

one must think of going there to earn a living—especially at the present time—without some capital, £3,000 at least, or better still £5,000. Even with such amounts the newcomer will find he has to be very careful to dig himself in and start whatever scheme he finally decides upon to maintain himself and his family without running short of money in the end. Employment for a salary must not be considered seriously by anyone as things are at present. On this point we have always spoken with emphasis, and the visitor whose views we are about to give, knowing how things are in South America, was not surprised to hear our views on the subject. Having visited most tropical centres since the War his opinion, that such advice holds good anywhere that he has visited, is worth remembering.

"During the past ten years," he went on to say, "I have wandered round looking for an industry to take up for myself and family, wife, two boys and two girls, all over sixteen, and I have found nothing that gives me confidence. Rubber along the Amazon seems but little worse than the plantation industry in Malaya. If I discuss cacao—your favourite cure for so many ills—I hear but one word of advice, 'leave it alone.' Coffee is overdone in quantity and very underdone in quality around Sao Paulo, &c., besides, there are other drawbacks over there. The same with cotton- or fruit-growing in Brazil, which we all know is being driven ahead by one wealthy concern from this side. I know the three C's—Cattle, Coffee, Cotton—but where can I go in for high-grade coffee and cotton if possible into practice? What of East Africa? Directly I settle there will they want to balance *their* budget and pile up expenditure at the same time as most every country seems to be doing? Kenya, I hear, is suitable for my trio in the shape of dairy farming, cotton and coffee, but can I hope to run all three in one area or shall I go in for high grade coffee and cotton if possible and have one or both boys trained to run the cattle business, whether for milk or meat?"

Having listened to all this, we said, "call on Major Corbet-Ward, the Secretary of the East African Dependencies, who may or may not pass you on to Major Dale, or the Commissioner. In any case they have books, pamphlets and reports giving the fullest particulars of all you—or any man and woman—can want to start them thinking of settling in British East Africa. One word of warning, however, do not cart your family and worldly goods (as we did elsewhere) and expect to do well straight away. Go by yourself, or with one other if you can easily afford to do so, and seek out the land and the people, and then make your decision. Working on those lines, and with the good services of the London Office behind you, you sound as if you will get all you ask for; in any case, you should not go far wrong if you follow their advice."

MARKET REPORTS, GOSSIP AND PRICES.

The New American President—How the U.K. loses her Trade and Efficiency.

ON the morning of the day (November 9) that it was known Franklin Roosevelt was to be the next President of America, a leading English morning paper, speaking of the outlook on the English money and stock markets, claimed that these markets seemed to have reached a point where external influences of a mixed character were operating and the trend of development during the next few days would be watched (and, of course, has been watched) with considerable interest. Up till then all the markets had been very much under the influence or shadow of the American election. To-day, if things still drag, some other reason, such as conversion schemes run riot, must be trotted out. There is, of course, and will continue to be for another six months at least, much uncertainty as to what effect America's choice will have, but around mid-November expectations of greater confidence and, through that, hopes of a probable revival had been stimulated. The query now is, will these expectations be disappointed?

Here the door of the sanctum opened and a beaming face and boisterous voice loomed over the dividing curtain. "Hurrah," shouted the voice, "Roosevelt's won, I am glad." In answer to this greeting we remarked that we were not sorry, but why was our visitor so very glad? To this he promptly replied, "Because things run a chance of 'getting a move' on them. I do not play golf, but if I understand what is meant by being bunkered or lost in the rough, I would tell you that Hoover has had both these happen to him and he had not got free when the voting came along. Whether he fully realized how tied up he was is doubtful, but all the same he probably did, for he is as cute as he is reticent. Put it another way and I would tell you he had got stalemated by his opponents and the American nation generally, and the latter at least have got tired of waiting and so looked for and secured a new partner. That's all. This done, both America and the world generally has to see what they can do with the President-elect. Bunkered or stalemate, as affairs are to-day over there, what will they be like in April and what shall we all be like because of the change—if Roosevelt does cause a change and is able to clear the course for his people to drive ahead—across the Pond. We have been told for months past to look to America for a lead, and have done so with what result? Truly a case of check stalemate everywhere. Now it is to be hoped that, having learnt wisdom, we shall look for a lead at home, where things, if in a pickle, are more comfortable than in America. Let us paddle our own canoe and leave America to extricate hers from the rapids and do the same. That, at least, is all I ask for. By-bye, I am off," and he went.

Now, a full week after, studying the news of the day, we were soon lost in the details given of the Indian (Rampur State) sugar machinery contract which has gone to Holland instead of coming here. Congratulations to the Dutch firm which has been cute enough to grab it, and shame to us for letting it go. If you refer back to p. 188 of our October issue, you will see we speak of the many up-to-date sugar factories that the well-wishers for India's future hope to see established over there. The machinery for many of these has already been ordered, and some are erected and at work. What proportion of the orders came our way, if known, has not been much talked about. One feels rather it has not been as large as those anxious to keep costly factories and skilled workers going would have liked. Why did not all the orders come our way, since it is known that first-class appliances were called for? This being so, can any country give better and surer satisfaction than our engineers? Has all the non-British sugar machinery erected in India come up to expectations, and if not, why not Buy British . . . every time?

It is being claimed that, in sharp comparison with the terrible depression in sugar-producing countries elsewhere, huge orders for new plant, for spares, renewals and repairs are being looked for from India for some time to come. This being so, non-British firms are trying hard to get into that market, and remain there, even if the prices they quote at the start are low, in spite of their advantage over us in respect to wages, working hours, &c. Whether all this is true or not we cannot say, but (being Christmas time) let us suppose that India does lay down those forty factories spoken of in the October issue, at an average cost all told of £100,000 each, a cost that is by no means high, as the Usine St. Madeleine in Trinidad was reported to have cost £250,000, when we visited it in 1896, and what has been spent on it since for renewals and improvements, we can only surmise. This being allowed, India is down to spend at least £4,000,000, to go in what way? Surely in wages only, for extracting ore and coal from Mother Earth; for smelting and turning out crude castings; for fitting, polishing, &c., the finished machines; for transport, &c., &c., that is to say, for salaries and wages in return for skilled mental and manual labour all through, from master minds to apprentices. Best of all, perhaps, for those who obtain the orders, it would mean that their factories, shops and machines are to be kept going and therefore maintained at concert pitch, whilst the staffs are kept efficient and not allowed, machines or men, to become rusty and inefficient.

Surely, if what we have outlined is correct, it is no exaggeration to claim that if this country

secured the balance of those possible £4,000,000 of orders, every penny would have gone and would go, to keep people in this country employed and off the dole. This being the case, surely it would not be too "brainy" a task to arrange with our factories turning out such machinery and appliances (also with the "Yard" in which the half-finished Cunarder, No. 534, is lying neglected), an agreement to make good any loss sustained when quoting competitive prices at such times like the present, when it must be far better to keep skilled (and any other) labour employed and efficient at a cost, if payment has to be made on the guarantee, of at most ten or fifteen per cent. of what should be paid to the same workers and their families if on the dole, whilst indirectly causing them to deteriorate in every way that matters. Say what you like, no one can keep at concert pitch when out of work, especially for an indefinite period. If *we* make the rest of the machinery that India needs, and make it to do the work that it is guaranteed to do, surely blessings will be showered all round to a degree that would make any cost incurred laughable (and sinful) to think about.

Truly it is all too terrible to think of such orders going elsewhere, so we will change the subject for something pleasant. Thus, we will skip rubber and come to:—

Coffee.

Having been squeezed out elsewhere in this issue, let us give details here of the papers read during the conference which has been dubbed "Coffee Planters' Days," that took place at Nairobi on June 29 and 30. Until copies are available at the publications department of the Crown Agents in London, we are afraid those requiring a copy must send 5s. or its equivalent to the Department of Agriculture at Nairobi, Kenya Colony.

With photographic illustrations and covering 130 pages (not numbered) the list of papers and their authors run as follows: The whole is really a bound collection of eleven Bulletins so we are giving the number of the Bulletin (of 1932) publishing each paper separately and this is why, being merely a collection of reprints, the paging does not run through.

- (1) Coffee Seed Selection, 4 pp. Bulletin No. 10.
- (2) Soil Wash, 3 pp. Bulletin No. 11. (There is no Bulletin No. 12.)
- (3) Coffee Pruning, 11 pp., 7 photos and 3 sketches. Bulletin No. 13. (There is no Bulletin No. 14.)
- (4) Green Manures and Cover Crops, 9 pp., Bulletin No. 15.
- (5) Some Factors in the Manuring of Coffee, 8 pp. Bulletin No. 16.
- (6) Bordeaux Spraying with particular reference to the Leaf and Berry Fall of Coffee, 13 pp., 4 photos. Bulletin No. 17.

(7) Coffee Mealy Bug Research (varieties of *Pseudococcus*), 17 pages. Bulletin No. 18.

(8) Vegetative Propagation. Its value in the Improvement of Permanent Crops and the Possibilities of its Application to Coffee, 8 pp. Bulletin No. 19.

(9) The Major Coffee Diseases, 13 pp. Bulletin No. 20.

(10) Coffee Soils of Kenya and their Cultivation, 17 pp. Bulletin No. 21.

(11) Coffee Capsid Bug (*Lygus simonyi*, Reut) and the Use of Kerosene Extracts of Pyrethrum for the Control of *Lygus* and *Antestia*. This, one understands, is built upon notes from data sent in by the native observers on the rational application of control measures for certain Insect Pests of Coffee. Pp. 18. Bulletin No. 22.

Mr. A. D. le Poer Trench, Senior Coffee Officer, is responsible for Bulletins 10, 11, 13, 15, and (with Mr. T. L. McClelland, Plant Inspector), No. 17. No. 16 is due to Mr. V. A. Beckley, the Senior Agricultural Chemist, No. 18, to the Entomologist, H. C. James, Ph.D. No. 19 to Mr. Gillet, Agricultural Officer, whilst Mr. J. McDonald, the Senior Mycologist, is responsible for Bulletin 20; the Soil Chemist, Mr. G. H. Gethin Jones, No. 21, and Mr. R. H. Le Pelley, the Entomologist for No. 22. Referring to the last Bulletin with its references to pyrethrum as the basis of an insecticide, our readers may be interested in the article on the Japanese export pyrethrum trade on p. 226.

It will be remembered that coffee occupies pp. 158, 175, under the heading, "Annual Report of the Senior Plant Breeder" in the 1931 Report of the Department of Agriculture of Kenya.

Coming to the usual run of market gossip, the sales lately in London have been on the small size. All the same, Kenya parcels did well, for home trade qualities secured full prices, whilst other kinds were about steady. The offerings of new crop Costa Rica, on the other hand, met with but a slow demand. At the auctions, sales reported included:—

Kenya, bold fair greenish and greyish, 70s. to 84s.; good, 102s.; fine, 111s. to 123s. 6d.; small, 58s. to 72s. 6d.; seconds, 63s. 6d. to 67s., and up to 91s.; peaberry, 63s. to 95s. 6d.

Tanganyika, bold common, greenish and greyish, 65s.; fair, 74s. to 81s.; good, 92s. 6d.; seconds, 60s. to 69s.; smalls, 51s. to 69s.; peaberry, 63s. to 80s.

Uganda, bold greenish 79s.

Costa Rica, bold fair greenish 87s. 6d., 88s. 6d., 94s.; seconds, 64s. to 70s.; smalls, 51s. 6d. to 56s., and later 49s. to 55s.; peaberry, 84s. 6d. to 89s. 6d.

Vegetable Oils (London and Liverpool).

Late news from Liverpool speaks of their palm-oil market as being firm if quiet. Sales and quotations include Lagos, forward shipment, sellers at

£18 5s.; softs afloat or on the spot £17 15s.; mediums afloat £18 5s.; hard for shipment £19 5s.; Red Sherbro £17 5s. For Malay oil, £19 per ton is quoted for Nov.-Dec. or Dec.-Jan. shipment with sellers over. Sellers of linseed cake speak of better business at fully firm prices including London-made at £8 to £8 5s. With cotton cake, Egyptian is higher at £4 10s. ex ship duty paid against £5 for English make. Groundnut cake ex Bombay expellers is put at £7 10s. ex ship. Other kinds have not been mentioned lately.

With regard to other products, we will start as usual with:—

COPRA PER TON.

	CEYLON F.M.S.	JAVA F.M.S.	STRAITS F.M.S.	PHILIPPINES F.M.S.	SOUTH SEAS F.M.S.
Nov.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	16 12 6	15 0 0	14 17 6	14 2 6	14 5 0
19	16 12 6	15 0 0	14 17 6	14 2 6	14 5 0
16	16 12 6	15 0 0	14 17 6	14 2 6	14 5 0
12	16 12 6	15 0 0	14 17 6	14 2 6	14 5 0
9	16 10 0	14 15 0	14 12 6	14 0 0	14 2 6

Malabar copra, f.m.g.w.s. N/Q. Rabaul Plantation on Nov. 23rd, stood at £14 7s. 6d. for f.m.s.

Coconut Oil per ton.

Ceylon mill oil, on November 23rd, was quoted at £28 for spot parcels against £24 10s. (cylinders) for Oct./Nov. shipment, whilst English deodorized in barrels is worth £31 per ton against £32 last month.

OTHER OILS PER TON.

	COTTONSEED				SOYA BEAN	PALM
	CASTOR FIRSTS	GROUNDNUT CRUDE*	CRUDE EGYPT	LINSEED SPOT†	SPOT, NAKED	KERNEL OIL‡
Nov.	£ s.	£ s.	£ s.	£ s. d.	£ s. d.	£ s.
23	37 0	31 0	22 10	17 5 0	23 10 0	22 10
19	37 0	31 0	22 10	17 10 0	23 10 0	22 10
16	37 0	31 0	22 10	17 15 0	23 10 0	22 10
12	37 0	31 0	22 10	17 15 0	23 10 0	22 10
9	37 0	31 0	22 10	17 15 0	24 0 0	22 10

* Crushed, naked. † Net, naked, ex-mill. ‡ At Hull, naked.

SEEDS PER TON.

	COTTONSEED				SOYA BEANS	
	LINSEED (AT HULL)	EGYPT	CASTOR	GROUND-	MANCH.	
	CALCUTTA	LA PLATA	BLACK	BOMBAY	NUTS	AFLOAT
Nov.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
23	10 8 9	8 15 0	7 7 6	12 5 0	13 1 3	7 16 3
19	10 11 3	8 15 0	7 1 3	12 5 0	13 6 3	7 17 6
16	10 12 6	8 16 3	7 1 3	12 2 6	13 5 0	7 13 9
12	10 13 9	8 15 0	6 16 3	12 2 6	13 7 6	7 13 9
9	10 13 9	8 16 3	6 15 0	12 2 6	13 7 6	7 13 9

Desiccated Coconut.

A firmer tone has set in for this article, leaving prices at the time of writing about a shilling above last month's rate. Fine on the spot has been sold at 26s. against 25s. for medium. Whilst halves, Nov./Dec. shipment have been placed at 24s. 3d. c.i.f.

Cotton.

Taking America first, the Forecast of the U.S. Bureau of 11,947,000 bales as the probable output of the cotton belt, is against 11,425,000 bales, their estimate the month before. The new returns being 500,000 bales larger than was expected caused the bears to get busy depressing the market. A return

of practically 12,000,000 bales, we are told, via *Cotton* of Manchester, with the nearly 13,000,000 "carry over," means a total supply calling for buyers of 25,000,000 bales, with supplies elsewhere running on the heavy side and stocks increasing. Whether new policies, and through them better trade, can be looked for in March, when the new President mounts the Saddle of State, remains to be seen. Everyone sincerely hopes that such a change will come. On the Bull side it is suggested that Europe generally is laying in stock, and this being the case, it must be a better demand for the finished article and/or a fear of higher prices that has moved them to do so.

Coming to prices, the following were the official "Spot" prices in Liverpool on November 12th, and on the corresponding dates in 1931, 1930, and 1913:—

	1932	1932 LAST WEEK	1931	1930	1913
Middling American	5.60*	5.39*	4.98*	5.96*	7.53†
Strict Middling American	5.80*	5.59*	5.10*	6.11*	7.61†
Fair Pernam	5.70	5.49	5.00	5.96	7.66
F.G.F. Sakel. Egyptian	7.99	7.76	7.40	9.65	11.10
Fine Broach	5.30	5.08	4.76	4.65	6.15
Fine No. 1 Oomra	5.02	4.80	4.51	4.25	6.15
Fine Bengal	4.69	4.47	4.31	3.95	5.75

* Universal Standards.

† Liverpool, Fully Mid.

‡ Good Mid.

Rubber.

If rubber remains cheap, it certainly is not on account of the brokers' counters in London being loaded with the article. On the contrary, any we have seen were unusually bare. Of course, trade in c.i.f. terms is going on all the time, but dealers and those who want spot rubber certainly have not an embarrassment of supplies to choose from. With regard to the position of rubber in this market, in America and elsewhere, Messrs. Lloyd, Matheson and Carritt have some interesting statements in their report of November 9th, when they point out that the rubber position for 1932 may now be estimated fairly closely. The world-consumption at 667,000 tons is slightly higher than last year, whilst the total absorption by the U.S.A. has been exceeded by the rest of the world for the first time since the World War, being 20,000 tons ahead.

ESTIMATED RUBBER POSITION DECEMBER 31ST, 1932, COMPARED WITH 1931.

SHIPMENTS—	1932 TONS	1931 TONS	TONS
Dutch East Indies	215,000	255,000	a reduction of 40,000
Ceylon	47,000	62,000	" "
Malaya	410,000	417,000	" "
Rest	40,000	55,000	" "
Total	712,000	789,000	" "

or 77,000 tons less.

ABSORPTION—	1932 TONS	1931 TONS	TONS
U.S.A.	322,000	349,000	a reduction of 27,000
Elsewhere	345,000	313,000	an increase of 32,000
Total	667,000	662,000	" "

The U.S.A. 27,000 tons behind, the rest of the world 32,000 tons ahead.

STOCKS.					
	1932 TONS	1931 TONS	TONS		
U.S.A.	395,000	322,000	an increase of 73,000		
U.K.	104,000	127,000	a reduction of 23,000		
Singapore and Penang	23,000*	50,000	„	„	27,000
Ceylon	3,000	4,000	„	„	1,000
Total	525,000*	503,000	an increase of 22,000		

or 22,000 tons more.

* Correction of 18,700 tons included in this return.

An addition of 22,000 tons to stock during 1932, against an increase in 1931 of 139,000 tons; no allowance has been made for invisible stocks in the figures for 1932 or 1931.

News from America shows their consumption during October stood at 21,018 tons against 22,277 tons in October last year and 22,491 tons in September last, whilst her stock and afloat came to 413,999 tons against 411,977 tons at the end of October, 1931. Coming to prices and quotations, Messrs. L. M. & C. quote as follows:—

SPOT QUOTATIONS—	1932		1932		1932		1931	
	NOV. 16TH		NOV. 9TH		NOV. 2ND		NOV. 18TH	
	s.	d.	s.	d.	s.	d.	s.	d.
Smoked sheet (F.A.Q.)	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{7}{8}$	0	3
Crepe (F.A.Q.)	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	3 $\frac{1}{2}$
FORWARD POSITIONS—	NOV. 16TH		NOV. 9TH		NOV. 2ND		NOV. 18TH	
	SMOKED SHEET		CREPE		SMOKED SHEET		CREPE	
	s.	d.	s.	d.	s.	d.	s.	d.
1932, November	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$
„ December	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	2 $\frac{1}{2}$
1933, January/March	0	2 $\frac{5}{8}$	0	2 $\frac{1}{2}$	0	2 $\frac{3}{4}$	0	2 $\frac{1}{2}$
„ April/June	0	2 $\frac{3}{4}$	0	3 $\frac{1}{2}$	0	2 $\frac{1}{2}$	0	3 $\frac{1}{2}$
„ July/September	0	2 $\frac{1}{2}$	0	3 $\frac{1}{2}$	0	2 $\frac{3}{4}$	0	3 $\frac{1}{2}$
„ October/December	0	2 $\frac{3}{4}$	0	3 $\frac{1}{2}$	0	2 $\frac{3}{4}$	0	3 $\frac{1}{2}$
STOCKS—	1932		1931		1932		1931	
	TONS		TONS		TONS		TONS	
	LONDON, Week ending Nov. 12th		LIVERPOOL		LONDON, Week ending Nov. 12th		LIVERPOOL	
	41,528		57,329		75,256		55,933	
Total	98,857		131,189					

SINGAPORE QUOTATIONS—

Nov. 16th.—Spot, 7 $\frac{1}{2}$ cents; January/March, 1933, 8 $\frac{1}{2}$ cents; April/June, 1933, 8 $\frac{5}{8}$ cents.

Nov. 9th.—Spot, 8 $\frac{1}{2}$ cents; January/March, 1933, 8 $\frac{5}{8}$ cents; April/June, 1933, 8 $\frac{1}{2}$ cents.

Balata.

This market remains quiet with the Dutch article subject to duty at 1s. 5d. c.i.f. against 1s. 8d. for British, free of duty, and 1s. 8d. to 1s. 9d. on the spot. Of foreign kinds other than the Dutch, Venezuelan on the spot is quoted at 10d. against 9d. c.i.f., Iquitos 3d. to 4d. nominal, and Panama about 1s. lb., but all such prices are more or less nominal.

Other Products.

“The rain in the tea areas of Nyasaland,” reports Barclays D.C.O. Bank, “produced a satisfactory flushing of bushes and the total production is expected to be greater than that of last season.” In a note concerning his recent visit to Tanganyika and Nyasaland (see our November issue, p. 213), Dr. Harold Mann tells us, “I had a great time in Africa and will discuss the visit with you when next in London. I have nearly finished my first report—on Tanganyika—and the second, dealing

with Nyasaland, will follow shortly.” Coming to the usual market news, we have to report that at the last set of auctions the demand generally was steady to good. Indians certainly met with a good demand; common and low mediums were well competed for and firm to occasionally dearer prices obtained. Fully medium, however, did not do so well. There was a quiet demand for Ceylons with considerable fluctuations on paper, but as the offerings showed a general falling off in quality any unevenness in prices with a lower tendency was not surprising. Java and Sumatra kinds were in small supply, but what was offered met with a good demand, and prices paid for medium to good qualities were fully firm.

Moving on to fibres, jute once more has been playing the kangaroo game although in a leisutely way. From the report of Messrs. Wigglesworth and Co., Ltd., and from other sources, it seems that during the first half of October prices fell steadily, mainly through the general absence of interest on the part of buyers. Later the persistent fall in sterling caused “bears” to cover and prices to advance until the loss in values of the previous fortnight had been wiped out. Lack of genuine buying support, which had continued through all this, then caused another sag, and values recently seemed to have declined to the lowest point. Higher advices from Calcutta stiffened the market for a short time, but as we write prices stood at £16 to £16 5s. for firsts, at which they stood in mid-October after touching £20 all c.i.f. in the beginning of that month.

Of other fibres, Manila shows little if any change and closes at £18 10s. (sellers) against £18 15s. before for J2; £16 5s. (buyers) for K which has been our quotation for two months; and £14 10s. for M1, which has also been quoted since September. W. & Co. Ltd. speak of a slight decrease in ships laid up, which is all to the good. Japan also has been buying steadily in marked contrast to the low ebb in orders from America. With sisal, the check to better prices mentioned last month, so far as British East African is concerned, has continued, and we have now to quote £14 10s. c.i.f., more or less, for October-December shipment, and 2s. 6d. more for November-January. At these rates a substantial business has been carried through and the market with a load off its chest is steadier. These are uncertain times and if consumers neglect to cover their needs on a fairly liberal basis—when they can do so at low costs to themselves—they may be sorry later on, whether such covering is done with sisal or other crops.

Shellac on the spot is quiet with TN orange at 60s.; fine orange, 65s. to 120s.; AC garnet 70s.; and button lac at 72s. 6d. against 62s. 6d., 70s. to 120s., 72s. 6d. and 75s. respectively a month ago. Palm kernels are reported to be steady at £11 2s. 6d. c.i.f., November-December to Hamburg, which price is well above October's and even

September's quotations. Coming to tin and copper, the former ends at about 20s. better than last month. Out East the price £161 fell 40s. to £159, when a weak spell set in and £154 10s. was paid, then £154, finally the spot cash price stands at £153 5s. against £152 last month. Political and financial uncertainties, especially in connection with War debts, are considered to have been one of the causes that has upset the copper market of late, but after a spell of limited buying a fair amount of activity is said to have made its appearance, and prices, after touching £32 7s. 6d., fluctuated around £31 12s. 6d. to £31 15s., which was last month's quotation.

Coming to finance, there are no changes to report in Bank Rates. This means that Berlin stands at 4 per cent., Italy 5 per cent., New York, Paris and Amsterdam $2\frac{1}{2}$ per cent., Brussels $3\frac{1}{2}$ per cent., London and the Swiss Banks 2 per cent. Bar Silver is quoted $18\frac{1}{8}$ d., and fine gold, after a drop of 7d., is still worth 125s. This makes our table work out at:—

NOVEMBER 19TH	1932	1931	1930
Bank rate	2 per cent.	6 per cent.	5 per cent.
Consols $2\frac{1}{2}$ per cent.	$73\frac{3}{4}$	$52\frac{7}{8}$	$58\frac{5}{8}$
Bar silver per oz.	$18\frac{1}{8}$	$19\frac{3}{4}$	$16\frac{1}{16}$
Exch. on New York	\$3.28	\$3.54	\$4.85

Actual quotations on New York stood at \$3.26 $\frac{1}{2}$ to \$3.30 $\frac{3}{4}$, but by November 28th, it had touched \$3.17 $\frac{1}{2}$ and there we must leave it. Gold, meanwhile, moved up to 128s. 4d., and then to 130s. 4d., whilst the £ has touched 12s. 11 $\frac{1}{4}$ d. (\$3.14 $\frac{1}{2}$).

Cloves.

Mr. V. H. Kirkham, F.I.C., B.Sc., retired last year from the post of Director of Agriculture in Zanzibar and Mr. A. J. Findley took his place. One is pleased to notice how the names of ex-students from the Imperial College of Agriculture at Trinidad keep cropping up in the Annual Reports of the different Colonies and Protectorates. The Zanzibar report for 1931 includes two, Mr. T. D. Rutter, B.Sc., and Mr. R. Johns. This report, of course, gives much information regarding clove production and also about coconuts and copra. Can one take it that coconuts are pushing aside cloves? You cannot help feeling, from all one knows on this side of the no-price-at-all for copra and coconut oil, that cloves must pay best, if only because they cannot surely pay worse than coconut products.

* * *

Returns are given of the clove output of Zanzibar and Pemba during the past thirty-five seasons, 1896-97 to 1930-31, and show, in a striking manner, the fluctuations in the output. Against an average output as under for the thirty-five seasons, in 1921-22 Zanzibar produced only 65,819 frasilas (35 lb.), against 231,831 the crop before (1920-21), and 291,417 frasilas in 1922-23.

The island of Pemba close by, now the chief producing centre, runs more even, the year shown below (1903-04) being the only time she dropped to five figures, probably owing to climatic conditions. We did know at the time but have by now forgotten the reason. The following crop returns are worth remembering by anyone interested in the article.

* * *

CLOVE-CROP RETURNS.

	Zanzibar	Pemba	Total
	Fras.	Fras.	Fras.
1898/99	145,000	466,000	611,000
1903/04	27,000	99,000	126,000
1904/05	81,000	654,000	735,000
1911/12	216,507	582,153	798,660
1913/14	145,586	638,094	783,680
1915/16	141,641	655,116	796,757
1921/22	65,819	200,983	266,802
1922/23	291,417	690,498	981,915
1929/30	280,296	597,626	877,922
1930/31	51,796	201,320	253,116
Aver. 35 crops	136,213	350,130	486,342

From the 1929-30 crop, 12,670 frasilas from Pemba and 38,351 from Zanzibar were delivered to the Clove Growers' Association and (for some reason) not included in the above returns for that year. Had this been done, the combined total would have mounted to 928,943 frasilas, or the second largest combined output.

* * *

The annual production of East African sisal, Major Walsh pointed out recently, is approximately 75,000 tons, on which the charges for lighterage alone at 10s. per ton amount to £37,500 per annum.

* * *

At far too young an age—being in his 63rd year only—Sir James Crawford Maxwell has joined the great majority, his death at sea whilst on his way to Australia being reported in the morning papers of November 18th. Sir J. C. had a full life so far as service to his country and fellowman was concerned, and was genuinely liked by all who came into touch with him, either when in Sierra Leone, Nigeria or the Gold Coast. This popularity was always apparent when Sir James was present at a dinner, lecture or other function. Very many will miss him badly.

* * *

In his letter, wishing us Good Luck on this issue, with its trip up the Nile and then on to Nairobi, Mr. J. Vocles, the proprietor of the Victoria Hotel at Cairo, expresses the hope that those of our readers who do visit that city will inspect his garden and make use of his verandah-terrace. Given the time to do so they should, for any meals needed, also sample his *chef*, meaning of course, the delicacies to suit all palates, served up by that gastronomic expert.

THE WORLD'S COCOA MARKET.

The Propagandist Army—Why not Enlist?

BY THE CONTROLLING EDITOR.

THE air is still charged with Propaganda, but it is still all air. So buoyant that, unless and until the rank and file come along and catch hold of the legs of this willing worker, the planters the right leg, and the retailers the left one, he cannot come to earth. Yet, until he is down and we keep him there no progress can be made.

How many jokes have been flung, during this century, to go back no farther, at the South American States, one Republic in particular, for having armies all Colonels and Generals with (practically) no rank and file. Of course all that is only a joke, but this question of an army to carry Propaganda into the camp of the enemy (i.e., poor demand, slack salesmanship and lack of knowledge of the article, viz., cocoa products, to be sold) is no joke; it is serious business and must be treated so if trades affecting thousands of people and millions of money are ever to wake up and do their share in the work of the various countries and through that of the world at large. At present, however, what has been and is being done for the good of the trade generally, has been done only by the Generals and Colonels, i.e., by the leaders of the army yet to be raised. Until that army is raised and arrayed keen to fight, no progress and no improved trade can be looked for.

Recently, a well-written paragraph in one of the London dailies commented on the over-worked conditions of leaders of men. In this case the reference was mainly aimed at politicians, many of whom are on the edge of a break-down or would be so if their doctors or friends did not occasionally pull them back, and it is the same with the leaders of the trades interested in the production and sale of cocoa products. In their case, however, so far as the writer can see, these leaders can kill themselves with overwork, for neither the individual planters on the one side nor the retailers on the other, taking them as a whole, show any signs of backing up their leaders by offers of personal service and subscriptions to carry on the good work outlined by those over them. Yet how can any progress be made until every planter and retailer—thousands in all—joins up and works to carry through each his or her little bit, until we secure success for all.

No one can compare the quiet humdrum existence of most planters, and especially of most retailers, with that of the controllers of the big companies who buy cocoa and sugar in the raw and turn them out as attractive and toothsome manufactured goods for the public to consume. On the consumption of these manufactured goods, made up from raw cocoa and sugar, depends the comfort and very existence of all or nearly all the cocoa planters on

the one hand and the retailers on the other. This being so, is it not rather wonderful that both of these, producers and retailers, have not enlisted in their thousands to fight the good fight of showing the public that there is nothing like cocoa and sugar in these days when money is so hard to earn and still harder to live on when you do get a little?

The Latest H.Q. Meeting.

The High Contracting Parties (with capital letters) of the Chocolate and Cocoa trades met at Santa Margherita Ligure in Italy, on October 3rd, and undertook to create an international fund for the purpose of organizing, subsidizing and controlling international propaganda for cocoa, *inter alia*, to develop and increase the consumption of cocoa products. Among the articles of agreement were the following:—

ARTICLE 2.

"The international propaganda fund will be constituted by collecting a uniform royalty on all cacao beans when leaving the cacao bean-producing countries, on behalf of whom this Convention shall have been ratified.

"The royalty mentioned in the above paragraph will be collected by the official customs services or by the services acting in their stead, and will amount to a sum equivalent to one pound sterling gold per ton of 1,000 kilogrammes of cacao beans exported.

"This royalty to be paid by the parties concerned before the exportation of the cacao beans will be allowed. The royalty will be invoiced separately by the planters or the various intermediate agents.

"It will be possible to pay this royalty with drafts payable at six months, the issue of which will be subject to special regulations.

ARTICLE 6.

"The International Office is authorized to expend each year 10 per cent. of the funds available on organizing and administering, or subsidizing, technical and scientific research work of general interest, intended to improve the cultivation of cacao.

"When a National Association of cacao planters considers it useless, in their own respect or in respect of the Colonies, Territories, &c., of the State where it is established, to devote part of the available funds to technical and scientific research work, the share allotted to the National Association of Manufacturers of cacao-based products established in that State by virtue of Article 5, *littera A*, 1°, shall be increased by the proportional

share not contributed to such technical and scientific research work. The International Office will, however, solicit in advance the views of the interested contracting State."

Unfortunately, the Conference was not too well attended. Although Monsieur Alfred Martougin, President of the International Headquarters, was present and took the chair, neither Mr. Van Houten for the Netherlands, Mr. Paul Cadbury for the U.K., nor Councillor Cailler for Switzerland, were present, overwork at home preventing them from attending.

Even with the others, ask yourselves what real following have these leaders to back them up and push on like the scouts and look-outs of an army to go ahead and prepare—according to instructions—for the heavy artillery? They have none at all on the side of the retailers and practically none on the side of the planters, Bahia, West Africa, Ecuador and the Dominican Republic in particular. Yet until the rank and file from these centres and from the retail side—retailers of cocoa powder in particular—flock to the standard, it is ridiculous, can one say wicked, to expect those at the head of affairs to carry on alone. If you do expect them to do so one of two things will happen: (1) either they will get knocked up through overwork, or else (2) as is mostly done, return to their factories and plod through their own mountains of labour hoping one day—which never comes—to have a clear spell during which to launch the scheme along lines agreed upon. Hence nothing is done and the valuable time of valuable minds is being wasted because Headquarters have no army ready and willing to take the field, the retailers at consuming centres being hopelessly ignorant of what is being done for them and therefore unable, even if willing, to help. What to do: can the manufacturers canvass them and explain how well it would pay them, more so than any other section, to help?

The Board of Trade Returns for October.

Enough of all that for the moment. Let us, as a change, look at something pleasant.

After a troublesome set back in September, it is helpful to be able to report quite a useful increase in our deliveries of raw cocoa for home use in the U.K. during October, when we delivered 5,907 tons this year against 4,361 last year and 6,110 tons in 1930. This makes the ten month's movements work out as under:—

BOARD OF TRADE RETURNS FOR THE U.K.

JANUARY-OCTOBER—RAW COCOA ONLY.

TEN MONTHS JAN.-OCT.	LANDED TONS	INCL. B.W.A. TONS	DEL'D. H.C. TONS	EXPORT TONS	STOCK OCT. 31 TONS
1930	51,162	47,909	47,339	2,629	31,300
1931	55,425	51,563	51,758	3,369	27,950
1932	55,064	51,304	54,773	2,998	26,200

Dec. 361 Dec. 259 Inc. 3,015 Dec. 371 Dec. 1,750

Now it remains to be seen how November and December will behave, and here may one be excused if the following note is struck regarding expanding the demand for cocoa, especially as powder, before going on to other matters.

Planters and Propaganda.

One foresees, if properly organized and trained, that if and when the planters as individuals, or through a body over which they have direct control (and not through an official or Governmental department), stream up to a man, woman also, to the Standard of Propaganda, opportunities will present themselves of arriving at an international agreement of one kind or another for the marketing of their product on the lines of the C.P.A. (Cocoa Planters Association) of Trinidad. The Gold Coast more or less has the advantage of such a scheme for marketing their cocoa already, whether the native producers realize the fact or not, but Bahia has nothing of the sort. Yet no centre would benefit more if she had such an organization, for with her increasing output and, to a degree, unchallenged opportunities for going ahead for some time to come, whilst the Gold Coast tends to go back, it makes it all the more necessary every year for that centre (Bahia) to put her sales' departments on an organized basis. When this has been arranged, then both Bahia and the Gold Coast should be able to name delegates to a Central International Committee to meet as, when and where the producers want to confer with the buyers. These meetings should take place at least once in three years. Each centre must agree to pay a portion of the expenses, and not claim the advantages without any payments as seems to be the case with the League of Nations in too many instances. Delegates to be at the rate of one to each 100,000 bags exported, smaller centres clubbing together until their exports reach that quantity when they can send a delegate, *and* if these delegates do not appear when summoned, they will be struck off for the year, and those whom they represent will still be liable by law for payment of their membership fees. Some such scheme would ensure, if anything can ensure, that planters will be less liable to clash when placing their big supplies and thus be able to stabilize values with more certainty than can possibly be done at present. Of all the gifts that the "Food of the Gods" can bestow either on manufacturers or planters, a reasonable degree of stabilization will always top the lot. Meanwhile of course the Committee, through a subsection, would be busy increasing the consumption and discovering new ways of presenting cocoa products for consumption as Messrs. Cadbury's have done with Bourn-Vita.

Lessons from Figures.

Whilst Bahia last season, i.e. May/April, 1931/32, put out 1,500,000 bags and continues to leave even that quantity behind this season, we

are once more warned officially not to expect too much from the Gold Coast. This centre, during her five crops for October to September, 1927/28 to 1931/32, exported as her main or major crop 994,978 tons, which means an average output of 198,995 tons, including 1928/29, when as much as 223,261 tons were shipped. Whatever the intermediate crops turn out, these are the periods and outputs that alone are worth troubling about. Having said that, can one claim that probably the average output of the major crop during the coming five seasons, 1932/33 to 1936/37, will probably work out between 190,000 and 193,000 tons, whilst Bahia *in bags* will possibly more than make up any deficiency. Even if prices trebled themselves, it is doubtful, unless the increase comes within the next two years, whether the Gold Coast could rally her neglected areas and send up the total. If all the talk one hears of a boom in West African Gold Mines becomes a fact, one certainly cannot look for any increase in her cacao production.

Now, to conclude, still thinking of these two chief centres, the returns from America show that, during the two months, September-October, the U.S.A. received 558,335 bags from Bahia, the Gold Coast and Nigeria, out of a total import of 617,062 bags, as against 241,236 bags in 1931, and a total import of 329,210 bags.

During the ten months, January to October, the imports into the three Atlantic ports (New York, Boston, Philadelphia) were:—

IMPORTS INTO AMERICA, JANUARY-OCTOBER.

	1932 BAGS	1931 BAGS
Total imports	2,624,363	2,522,756
INCLUDING		
Accra	798,119	796,253
Lagos	233,289	223,885
Ivory Coast	48,744	114,566
Bahia	966,796	533,809
Sanchez	200,514	343,768
Trinidad	74,685	156,920
STOCK		
	1932 BAGS	1931 BAGS
September 30th	596,943	247,953
October 15th	586,554	252,665
		1930 BAGS
		391,127
		406,908

Coming to prices: Trinidads, on the spot in London, seem to be holding their own. A sale of Fine at 50s. has been mentioned with quotations ranging as low as 42s. and as high as 52s. Fine Grenadas, 38s., and good, fair to good, 32s. to 36s.; Jamaica, 34s.; St. Lucia, 35s.; Accras, 26s. 3d. to 30s. all spot. With Bahias, the spot value is put around 37s., against 29s. c.i.f..

* * *

The Director-General of the International Bureau of Chocolate and Cacao Manufacturers (Brussels), sends an express letter asking us to correct a mistake, viz., the idea of an international scheme of propaganda to benefit the cacao industry was adopted at the International Conference held at Brussels in September, when delegates from some twenty countries were present. The proposals did not come from the gathering in Italy on October 3rd. We will write further on the matter next month.

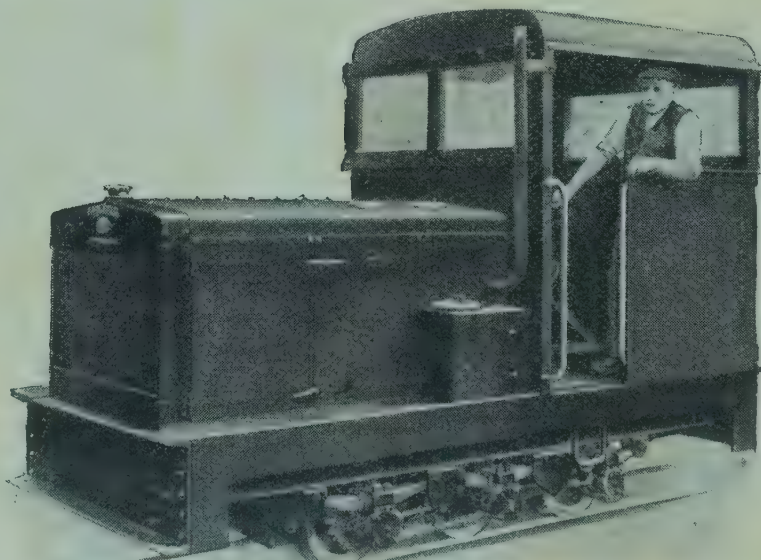
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STANDARD MODELS

Horse-power	Weight
12/20	2 Tons
20/35	2½ „
20/35	4 „
40/50	6 „
40/50	8 „
40/50	10 „



STANDARD MODELS

Horse-power	Weight
12/16	2½ Tons
12/16	3¼ „
20/36	2½ „
20/36	4 „
32/42	5 „
65/85	10 „

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